

A11100 985365

NBS
PUBLICATIONS

NAT'L INST OF STANDARDS & TECH R.I.C.



A11100985365

Gallagher, J. W./Bibliography of low ener
QC100 .U57 V426;SUPP1;1979 C.1 NBS-PUB-C



NBS SPECIAL PUBLICATION **426**, Suppl. 1

U.S. DEPARTMENT OF COMMERCE / National Bureau of Standards

Bibliography of Low Energy Electron and Photon Cross Section Data

(January 1975 through December 1977)

QC
100
U57
No. 426
SUPPL. 1
1979
C.2

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards¹ was established by an act of Congress March 3, 1901. The Bureau's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Bureau conducts research and provides: (1) a basis for the Nation's physical measurement system, (2) scientific and technological services for industry and government, (3) a technical basis for equity in trade, and (4) technical services to promote public safety. The Bureau's technical work is performed by the National Measurement Laboratory, the National Engineering Laboratory, and the Institute for Computer Sciences and Technology.

THE NATIONAL MEASUREMENT LABORATORY provides the national system of physical and chemical and materials measurement; coordinates the system with measurement systems of other nations and furnishes essential services leading to accurate and uniform physical and chemical measurement throughout the Nation's scientific community, industry, and commerce; conducts materials research leading to improved methods of measurement, standards, and data on the properties of materials needed by industry, commerce, educational institutions, and Government; provides advisory and research services to other Government Agencies; develops, produces, and distributes Standard Reference Materials; and provides calibration services. The Laboratory consists of the following centers:

Absolute Physical Quantities² — Radiation Research — Thermodynamics and Molecular Science — Analytical Chemistry — Materials Science.

THE NATIONAL ENGINEERING LABORATORY provides technology and technical services to users in the public and private sectors to address national needs and to solve national problems in the public interest; conducts research in engineering and applied science in support of objectives in these efforts; builds and maintains competence in the necessary disciplines required to carry out this research and technical service; develops engineering data and measurement capabilities; provides engineering measurement traceability services; develops test methods and proposes engineering standards and code changes; develops and proposes new engineering practices; and develops and improves mechanisms to transfer results of its research to the ultimate user. The Laboratory consists of the following centers:

Applied Mathematics — Electronics and Electrical Engineering² — Mechanical Engineering and Process Technology² — Building Technology — Fire Research — Consumer Product Technology — Field Methods.

THE INSTITUTE FOR COMPUTER SCIENCES AND TECHNOLOGY conducts research and provides scientific and technical services to aid Federal Agencies in the selection, acquisition, application, and use of computer technology to improve effectiveness and economy in Government operations in accordance with Public Law 89-306 (40 U.S.C. 759), relevant Executive Orders, and other directives; carries out this mission by managing the Federal Information Processing Standards Program, developing Federal ADP standards guidelines, and managing Federal participation in ADP voluntary standardization activities; provides scientific and technological advisory services and assistance to Federal Agencies; and provides the technical foundation for computer-related policies of the Federal Government. The Institute consists of the following divisions:

Systems and Software — Computer Systems Engineering — Information Technology.

¹Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington, D.C. 20234.

²Some divisions within the center are located at Boulder, Colorado, 80303.

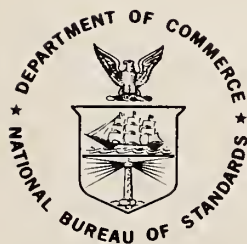
The National Bureau of Standards was reorganized, effective April 9, 1978.

Bibliography of Low Energy Electron and Photon Cross Section Data

(January 1975 through December 1977)

J. W. Gallagher, J. R. Rumble, Jr.,
and E. C. Beaty

Joint Institute for Laboratory Astrophysics
National Measurement Laboratory
National Bureau of Standards
Boulder, Colorado 80303



Special publication 426 suppl. 1
U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, Secretary

Jordan J. Baruch, Assistant Secretary for Science and Technology

415 NATIONAL BUREAU OF STANDARDS, Ernest Ambler, Director

Issued June 1979

Library of Congress Catalog Card Number: 78-600156

National Bureau of Standards Special Publication 426, Suppl. 1

Nat. Bur. Stand. (U.S.), Spec. Publ. 426, Suppl. 1, 115 pages (June 1979)

CODEN: XNBSAV

U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON: 1979

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Stock No. 003-003-02074-5 Price \$4.00

(Add 25 percent additional for other than U.S. mailing).

Foreword

The National Standard Reference Data System was established in 1963 for the purpose of promoting the critical evaluation and dissemination of numerical data of the physical sciences. The program is coordinated by the Office of Standard Reference Data of the National Bureau of Standards but involves the efforts of many groups in universities, government laboratories, and private industry. The primary aim of the program is to provide compilations of critically evaluated physical and chemical property data. These tables are published in the *Journal of Physical and Chemical Reference Data*, in the NSRDS-NBS series of the National Bureau of Standards, and through other appropriate channels.

The task of critical evaluation is carried out in various data centers, each with a well-defined technical scope. A necessary preliminary step to the critical evaluation process is the retrieval from the world scientific literature of all papers falling within the scope of the center. Each center, therefore, builds up a comprehensive well-indexed bibliographical file which forms the base for the evaluation task. Bibliographies derived from these files are published when they appear to be of value to research workers and others interested in the particular technical area.

Further information on NSRDS and the publications which form the primary output of the program may be obtained by writing to the Office of Standard Reference Data, National Bureau of Standards, Washington, DC 20234.

David R. Lide, Jr., Chief
Office of Standard Reference Data

Contents

	Page
Foreword	1
Introduction	3
I. Electron Cross Section Index	3
Total Scattering, Experimental	3
Total Scattering, Theoretical	4
Elastic Scattering, Experimental	5
Elastic Scattering, Theoretical	7
Ionization, Experimental	10
Ionization, Theoretical	12
Detachment, Theoretical	13
Electronic Excitation, Experimental	15
Electronic Excitation, Theoretical	19
De-Excitation, Experimental	19
De-Excitation, Theoretical	19
Dissociation, Experimental	20
Dissociation, Theoretical	20
Dissociative Ionization, Experimental	21
Dissociative Ionization, Theoretical	21
Dissociative Attachment, Experimental	22
Dissociative Attachment, Theoretical	22
Vibrational Excitation, Experimental	23
Vibrational Excitation, Theoretical	23
Rotational Excitation, Experimental	24
Rotational Excitation, Theoretical	24
Free-Free Emission, Experimental	24
Free-Free Emission, Theoretical	26
Radiative Recombination, Experimental	26
Radiative Recombination, Theoretical	27
Radiative Attachment, Experimental	27
Radiative Attachment, Theoretical	28
Dissociative Recombination, Experimental	28
Dissociative Recombination, Theoretical	29
II. Positron Cross Section Index	29
Total Scattering, Experimental	29
Total Scattering, Theoretical	29
Elastic Scattering, Experimental	29
Elastic Scattering, Theoretical	29
Ionization, Theoretical	29
Electronic Excitation, Theoretical	29
Vibrational Excitation, Theoretical	30
Rotational Excitation, Theoretical	30
III. Photon Cross Section Index	31
Absorption, Experimental	31

	Absorption, Theoretical	Page 32
	Scattering, Experimental	32
	Scattering, Theoretical	32
	Ionization, Experimental	34
	Ionization, Theoretical	35
	Detachment, Experimental	39
	Detachment, Theoretical	40
	Fluorescence, Experimental	40
	Dissociation, Experimental	40
	Dissociation, Theoretical	42
IV.	Bibliography	43
V.	Author Index	86
VI.	Errata for NBS Special Publication 426	106

Bibliography of Low Energy Electron and Photon Cross Section Data (January 1975 through December 1977)

J. W. Gallagher, J. R. Rumble, Jr., and E. C. Beaty

*Joint Institute for Laboratory Astrophysics, National Measurement Laboratory,
National Bureau of Standards, Boulder, Colorado 80303*

A bibliography of original reports of measurements or calculations of electron, positron, and photon cross sections for atoms, small molecules, and their ions is presented. A detailed index to the bibliography facilitates retrieval of cross section data for specific processes and associated atomic or molecular species. A comprehensive author index is included. The bibliography covers the calendar years 1975-1977. This work supplements a previous bibliography which covered the literature through 1974.

Key words: Atom; collision cross section; detachment; dissociation; elastic scattering; electron; excitation; ion; ionization; molecule; photon; positron.

Introduction

This bibliography is the result of a continuing literature compilation encompassing electron, positron, and photon collisions with atoms, small molecules, and their ions. It is an update of NBS Special Publication 426¹ which covers these topics up to and through 1974. The organization responsible for this continuation is the Low Energy Atomic Collision Cross Section Information Center which is located in the Joint Institute for Laboratory Astrophysics, University of Colorado, Boulder, Colorado 80309. The Information Center is part of the National Standard Reference Data System (NSRDS) of the National Bureau of Standards. The Center is supported by the Office of Standard Reference Data of the National Bureau of Standards.

The scope of this update is the same as that covered by NBS Special Publication 426. The general criteria for inclusion of species are that they be important in modeling planetary and stellar atmospheres, galactic gas clouds, gas discharges and lasers, or low temperature plasmas.

Papers reporting measurements or calculations of the following quantities are included, since under proper conditions cross sections have been or can be simply derived from them,

- | | |
|----------------------|---|
| For electron impact: | (1) scattering phase shifts
(2) scattering lengths
(3) ionization efficiencies
(4) excitation efficiencies |
| For photon impact: | (1) absorption coefficients
(2) ionization coefficients |

Citations contained in the electron bibliography cover an electron energy range of approximately 0-10 keV. The photon papers are primarily restricted to the wavelength range represented by the ultraviolet region of the spectrum (1.0 to 300 nm).

In addition to references from the formal scientific literature we have included theses, reports given at meetings in some cases, and rarely company or agency reports which have been printed and circulated. However, reference is not made to material that is unavailable either through library facilities or government document centers. No classified material is included.

Inclusion of a reference in this bibliography does not imply a value judgment about the accuracy of the data.

References identified on or before February 1978 and bearing a publication date on or before 31 December 1977 are included. This means that the bibliography is essentially complete through calendar year 1977. There are probably some references from obscure or nonstandard sources which have not been identified and included. These are normally found through abstracting services which in some cases are 6 months to 1 year behind publication dates.

¹ Kieffer, Lee J., Bibliography of Low Energy Electron and Photon Cross Section Data (through December 1974), Nat. Bur. Stand. (U.S.), Spec. Publ. 426, 219 pages (March 1976).

Organization

This report consists of three major parts: the index to the Bibliography, the list of citations in the Bibliography, and the Author Index.

Index

The index is a list of references which are identified by our citation number, the first author's surname and the last two digits of the year of publication. For example, 75 means 1975. The citation number identifies the reference in the list of citations.

The references are indexed by a hierarchy of terms which identify the cross section data to be found in the reference. First of all there are three large groupings: the electron, positron, and photon lists. Within each of these large groupings the order of the index terms is as follows:

- (1) Process (see Contents).
- (2) Experimental or Theoretical.
- (3) Normalized or Relative (the data are considered normalized if given in absolute units).
- (4) Atomic or Molecular Species (including the degree of ionization of the target). The common chemical symbols for the atomic species come first and are alphabetically ordered. They are followed by diatomics, triatomics, etc. The molecular symbols are alphabetically ordered. If a subscript appears one merely treats it as a repeating symbol for purposes of ordering.
- (5) The states of the target and their ordering are as follows:
 - (a) Neutral unexcited species.
 - (b) Negative ions, indicated by a superscript minus sign following the atomic or molecular symbol.
 - (c) Neutral excited species, indicated by a superscript asterisk following the atomic or molecular symbol.

- (d) Positively charged ions, indicated by a superscript plus sign and an integer indicating the degree of ionization following the atomic or molecular symbol.

Bibliography

In this section the complete citations for all references are given. The citations are listed in numerical order by number. All authors' surnames and initials and the title are given as well as journal name, volume, inclusive pages, and year of publication. For nonjournal references, standard identifying information used by libraries for cataloging is given.

Author Index

In this section all authors are listed alphabetically by surname. After each author's name is a list of citation numbers which indicate which references he authored or coauthored.

Errata

We have included, for completeness, a set of errata for the bibliography through 1974 which was published as NBS Special Publication 426.

Acknowledgments

The collection of these data was begun in 1962 and, through 1974, was primarily the work of the first director of the Center, Dr. L. J. Kieffer. We would like to thank Drs. Leanne Pitchford, James Land, and A. V. Phelps for their help and advice on the present publication. We especially would like to thank Anita Woehlk and Pat Ruttenberg for their role in the computer work involved in maintaining the files and producing this end product.

I. Electron Cross Section Index

TOTAL SCATTERING EXPERIMENTAL

Normalized

Ar	7596 Dehmel, 76	10742 Stein, 77
He	7596 Dehmel, 76 10480 De Heer, 77 10608 Jost, 77 10741 Bullis, 77	9397 Blaauw, 77 10607 Blaauw, 77 10733 Kauppila, 77 10742 Stein, 77
He ⁺	7886 Wilson, 76	
Na ⁺	9015 Bhaskar, 77	
O	7596 Dehmel, 76	
KI	8269 Rudge, 76	
N ₂	7465 Peixoto, 75 9397 Blaauw, 77	8023 Peixoto, 76
O ₂	7596 Dehmel, 76	
CO ₂	7147 Bennani, 75	

Relative

Cd	8919 Burrow, 76
He	6831 Bolduc, 75
He ⁺	10448 Delpech, 77
Hg	8919 Burrow, 76
Mg	8919 Burrow, 76
Zn	8919 Burrow, 76
CO ₂	7451 Donohue, 75
H ₂ O	6906 Mathur, 75
CH ₃ OH	6906 Mathur, 75
SF ₆	7451 Donohue, 75
C ₆ H ₆	7451 Donohue, 75

TOTAL SCATTERING THEORETICAL

Normalized

Al	7238 Inokuti, 75	9661 Ledovskoi, 76
Ar	7238 Inokuti, 75	9471 McCarthy, 77
B	7238 Inokuti, 75	
Be	7238 Inokuti, 75	
C	7238 Inokuti, 75	
Cl	7238 Inokuti, 75	
F	7238 Inokuti, 75	
H	6837 Vanderpoorten, 75 8314 Riley, 76 9678 De Heer, 77	7238 Inokuti, 75 8935 Rudge, 76
He	6837 Vanderpoorten, 75 9471 McCarthy, 77	7238 Inokuti, 75 10480 De Heer, 77
Hg	6797 Walker, 75	
K	7883 Walters, 76	
Kr	9471 McCarthy, 77	
Li	7238 Inokuti, 75	7883 Walters, 76
Mg	7238 Inokuti, 75	
N	7238 Inokuti, 75 7508 Thomas, 75	7419 Thomas, 75 7897 Berrington, 75
Na	7238 Inokuti, 75	7883 Walters, 76
Ne	7238 Inokuti, 75	9471 McCarthy, 77
O	7238 Inokuti, 75	
P	7238 Inokuti, 75	
S	7238 Inokuti, 75	
Si	7238 Inokuti, 75	
Xe	9471 McCarthy, 77	
CO	7421 Chandra, 75	
CsCl	9648 Fabrikant, 76	
CsF	9648 Fabrikant, 76	

ELECTRON CROSS SECTION INDEX

TOTAL SCATTERING THEORETICAL			ELASTIC SCATTERING EXPERIMENTAL		
Normalized			Normalized		
H ₂	7453 Drukarev, 75	9063 Liu, 77	Kr	6955 Williams, 75 9257 Vuskovic, 75	7884 Jansen, 76
KI	8269 Rudge, 76 9648 Fabrikant, 76	9127 Dickinson, 77	Li	7547 Williams, 75	8316 Williams, 76
N ₂	7601 Chandra, 76 9466 Buckley, 77	8107 Brandt, 76	Ne	6555 Gupta, 75 6955 Williams, 75 7885 Jansen, 76 10357 Guskov, 77	6860 Gupta, 75 7438 Crowe, 75 8735 Du Bois, 76
Na ₂	7453 Drukarev, 75		Pb	6599 Williams, 75	
CO ₂	8437 Morrison, 76		Xe	6646 Williams, 75 7438 Crowe, 75	6955 Williams, 75 7884 Jansen, 76
Relative			Zn	6878 Williams, 75	7553 Bozinis, 75
Ar	7703 Duguet, 75		CO	8735 Du Bois, 76	
He	7079 Barden, 75		H ₂	6951 Srivastava, 75 9369 Van Wingerden, 77	7117 Fink, 75
Li ⁺	7079 Barden, 75		LiF	10725 Vuskovic, 77	
CsF	9127 Dickinson, 77		N ₂	7381 Finn, 75 7437 Du Bois, 75 7858 Srivastava, 76 8735 Du Bois, 76	7388 Herrmann, 76 7452 Srivastava, 75 7885 Jansen, 76 9854 Cartwright, 77
ELASTIC SCATTERING EXPERIMENTAL					
Normalized			NO	7450 Reinhardt, 75	
Ar	6795 Williams, 75 6860 Gupta, 75 7885 Jansen, 76 8735 Du Bois, 76	6804 Du Bois, 75 7437 Du Bois, 75 8068 Vuskovic, 76	O ₂	7464 Hall, 75	
Bi	6700 Williams, 75		C ₂ H ₂	6946 Fink, 75	
Cu	10023 Trajmar, 77	10624 Trajmar, 77	CH ₄	7501 Oda, 75	
H	6794 Williams, 75 7514 Williams, 75	6953 Williams, 75 9369 Van Wingerden, 77	C ₂ H ₄	6946 Fink, 75	
He	6545 McConkey, 75 6860 Gupta, 75 7885 Jansen, 76 8177 Radchenko, 76 10357 Guskov, 77 10608 Jost, 77	6553 Andrick, 75 6956 Kurepa, 75 8025 Srivastava, 76 8937 Huetz, 76 10480 De Heer, 77	SF ₆	7452 Srivastava, 75	8079 Srivastava, 76
Hg	8451 Duweke, 76		UF ₆	7452 Srivastava, 75	8079 Srivastava, 76
K	9679 Williams, 77		C ₂ H ₆	6946 Fink, 75	
			Relative		
			Cs	9953 Gehenn, 77	10600 Gehenn, 77
			He	6833 Andrick, 75 7521 Huetz, 75	7378 Tsung, 75 7532 Andrick, 75

ELECTRON CROSS SECTION INDEX

ELASTIC SCATTERING EXPERIMENTAL

Relative

Normalized

Hg	8028 Hanne, 76 10601 Reichert, 77	10031 Albert, 77
K	6741 Eyb, 75	7591 Eyb, 76
Kr	7593 Heindorff, 76	
Na	6741 Eyb, 75	
Rb	9326 Jaduszliwer, 76	
Xe	7593 Heindorff, 76	9172 Kessler, 77
CO	6744 Swanson, 75	
HCl	6798 Rohr, 75	7447 Rohr, 75
N ₂	9605 Rohr, 77	
NO	6751 Tronc, 75	
C ₂ H ₂	7077 Duguet, 75	
C ₂ H ₄	7077 Duguet, 75	
SF ₆	7461 Chutjian, 75	9832 Trajmar, 77
C ₂ H ₆	7077 Duguet, 75	

ELASTIC SCATTERING THEORETICAL

Normalized

Ar	6871 Gryzinski, 75 6997 Sukumar, 75 7115 Bonham, 69 8399 Amusia, 75 9192 Roy, 77 10618 Khare, 77	6958 Joachain, 75 7026 Riley, 75 7436 Joachain, 75 9168 Joachain, 77 9471 McCarthy, 77
As	7115 Bonham, 69	
B	7115 Bonham, 69	
Ba	6806 Gregory, 74 10758 Sergeev, 77	9845 Sergeev, 77
Br	6806 Gregory, 74	7115 Bonham, 69
C	7115 Bonham, 69	7385 Thomas, 75

ELASTIC SCATTERING THEORETICAL

C	9238 Le Dourneuf, 77	10380 Le Dourneuf, 77
C ⁺³	9238 Le Dourneuf, 77	
Ca	6806 Gregory, 74 9845 Sergeev, 77	8399 Amusia, 75 10758 Sergeev, 77
Cd	6806 Gregory, 74	
Cl	7115 Bonham, 69	
Co	7115 Bonham, 69	
Cs	6828 Gryzinski, 75 9043 Bordonaro, 76 10599 Stefanov, 77	7552 Damburg, 75 9845 Sergeev, 77
Cu	7554 Winter, 75	10624 Trajmar, 77
F	7115 Bonham, 69	10177 Robb, 77
Fe	7115 Bonham, 69	
Ga	6806 Gregory, 74	
H	6506 Hunter, 75 6683 Oppenheimer, 75 6746 Rudge, 75 6807 Jhanwar, 75 6828 Gryzinski, 75 6991 Lin, 75 7028 Ishihara, 75 7115 Bonham, 69 7386 Madan, 75 7511 Fon, 75 7517 Massaro, 75 7856 Gau, 75 8178 Kamal, 76 8182 Geltman, 72 8273 Bransden, 76 8332 Callaway, 74 8614 Saha, 73 8726 Bransden, 76 8916 Gien, 76 8956 Hutt, 76 9167 Byron Jr., 77 9258 Rescigno, 77 9395 Sil, 77 9456 Ghosh, 77 9667 Gien, 77 9678 De Heer, 77 9825 Rudge, 77 10020 Lal, 77 10612 Srivastava, 77	6626 Winters, 74 6684 Register, 75 6796 Saha, 75 6808 Madan, 75 6837 Vanderpoorten, 75 6995 Stauffer, 75 7031 Choudhury, 75 7383 Callaway, 75 7389 Jhanwar, 75 7512 Sil, 75 7573 Byron Jr., 75 8055 Foster, 76 8181 Foster, 76 8193 Das, 76 8314 Riley, 76 8336 Miller, 71 8622 Page, 76 8871 Saha, 76 8921 Khayrallah, 76 9128 Reid, 77 9239 Dahlgren, 77 9365 Joachain, 77 9396 Hayashi, 77 9608 Stewart, 77 9669 Gien, 77 9805 Rountree, 77 9960 Kumar, 77 10021 Dewangan, 77

ELECTRON CROSS SECTION INDEX

ELASTIC SCATTERING THEORETICAL

ELASTIC SCATTERING THEORETICAL

Normalized

Normalized

H ⁻	6745 Kumar, 75		N	7419 Thomas, 75	7508 Thomas, 75
H ⁺¹	7122 Smith, 75			7897 Berrington, 75	8333 Burke, 74
				9830 John, 77	10380 Le Dourneuf, 77
He	6508 Aashamar, 74	6548 Banyard, 75	N ⁺¹	7379 Szydluk, 74	9238 Le Dourneuf, 77
	6557 Herzenberg, 75	6618 Bransden, 75	N ⁺²	7379 Szydluk, 74	
	6626 Winters, 74	6828 Gryzinski, 75	N ⁺³	7379 Szydluk, 74	
	6837 Vanderpoorten, 75	7026 Riley, 75	N ⁺⁴	7379 Szydluk, 74	
	7080 Smith, 75	7115 Bonham, 69	N ⁺⁵	7379 Szydluk, 74	
	7389 Jhanwar, 75	7390 Taylor, 75	N ⁺⁶	7379 Szydluk, 74	
	7393 Hata, 75	7536 Nesbet, 75			
	7573 Byron Jr., 75	8027 Sinfailam, 76	Na	6806 Gregory, 74	6828 Gryzinski, 75
	8178 Kamal, 76	8196 Paikeday, 76		7636 Bui, 75	7854 Guha, 75
	8273 Bransden, 76	8333 Burke, 74		8005 Stewart, 75	9043 Bordonaro, 76
	8334 Thomas, 74	8335 Nesbet, 74		9342 Bui, 77	
	8399 Amusia, 75	8402 De Heer, 76	Na ⁺¹	7379 Szydluk, 74	7441 Drukarev, 75
	8614 Saha, 73	8721 Hayashi, 76		8619 Drukarev, 76	
	8732 Maiti, 76	8869 Aashamar, 75	Ne	6507 Byron Jr., 74	6871 Gryzinski, 75
	8939 Jhanwar, 76	8956 Hutt, 76		6883 Suzuki, 75	6884 Suzuki, 75
	9039 Hata, 77	9041 Byron Jr., 77		7115 Bonham, 69	7382 Blum, 75
	9167 Byron Jr., 77	9244 Dewangan, 77		8956 Hutt, 76	9041 Byron Jr., 77
	9327 Ho, 77	9346 Maiti, 76		9244 Dewangan, 77	9471 McCarthy, 77
	9471 McCarthy, 77	9831 McGreevy, 77	Ni	7115 Bonham, 69	
	9842 Gien, 77	10036 Shingal, 77			
	10446 Shingal, 77	10480 De Heer, 77	O	6509 Thomas, 75	6703 Kutcher, 74
	10610 Basu, 77			7080 Smith, 75	7115 Bonham, 69
He ⁻	7390 Taylor, 75	8719 Chen, 76		7384 Blaha, 75	7602 Tambe, 76
He ⁺¹	6683 Oppenheimer, 75	8273 Bransden, 76		8276 Tambe, 76	9845 Sergeev, 77
Hg	6726 Hutt, 75	6797 Walker, 75		10380 Le Dourneuf, 77	
K	6806 Gregory, 74	9043 Bordonaro, 76	O ⁺¹	7379 Szydluk, 74	
Kr	6871 Gryzinski, 75	7115 Bonham, 69	O ⁺²	7379 Szydluk, 74	
	8723 Meron, 76	9192 Roy, 77	O ⁺³	7379 Szydluk, 74	
	9471 McCarthy, 77		O ⁺⁴	7379 Szydluk, 74	
Li	6806 Gregory, 74	6996 Gregory, 75	O ⁺⁵	7379 Szydluk, 74	
	7125 Kumar, 75	7883 Walters, 76	O ⁺⁶	7379 Szydluk, 74	
	8005 Stewart, 75	8312 Chan, 76	O ⁺⁷	7379 Szydluk, 74	
	8335 Nesbet, 74	8938 Vanderpoorten, 76	Os	6806 Gregory, 74	
	10591 Bhatia, 77				
Li ⁺¹	6594 Kumar, 75				
Mg	6806 Gregory, 74				
Mn	6806 Gregory, 74				
Mo	6806 Gregory, 74				
N	7115 Bonham, 69	7384 Blaha, 75			

ELECTRON CROSS SECTION INDEX

ELASTIC SCATTERING THEORETICAL

ELASTIC SCATTERING THEORETICAL

Normalized

Normalized

P	6806 Gregory, 74	7115 Bonham, 69
Rb	8356 Fabrikant, 76	9043 Bordonaro, 76
Rh	6806 Gregory, 74	
S	7115 Bonham, 69	
Sc ⁺³	8619 Drukarev, 76	
Se	6806 Gregory, 74	
Si	7115 Bonham, 69	
Sr	6806 Gregory, 74	
Ti	7115 Bonham, 69	
V	7115 Bonham, 69	
W	6806 Gregory, 74	
Xe	6871 Gryzinski, 75 8399 Amusia, 75	7435 Tancic, 75 9471 McCarthy, 77
Yb ⁺²	8619 Drukarev, 76	
CO	9670 Chandra, 77	
CsCl	6881 Ashihara, 75	8365 Onda, 76
F ₂	8179 Schneider, 76 8718 Rescigno, 76	8180 Schneider, 76
HCl	9333 Gianturco, 77	
HF	9333 Gianturco, 77	
H ₂	6550 Winter, 75 6811 Schneider, 75 6990 Bhattacharyya, 75 7896 Morrison, 75 8620 Truhlar, 76 9129 Huang, 77 9840 Klonover, 77 10086 Baille, 77 10354 Khare, 77 10628 Baille, 77	6551 Rescigno, 75 6871 Gryzinski, 75 7417 Weatherford, 74 8058 McCurdy Jr., 76 9063 Liu, 77 9653 Hayashi, 77 9957 Schneider, 77 10162 Pande, 77 10627 Kaldor, 77
H ₂ ⁻	6620 Bell, 75	
LiF	10626 Collins, 77	
N ₂	6828 Gryzinski, 75	8058 McCurdy Jr., 76

N ₂	8195 Brandt, 76 8725 Chandra, 76 9291 Crees, 77 9836 Morrison, 77 10625 Crees, 77	8436 Hayashi, 76 9241 Morrison, 77 9466 Buckley, 77 10007 Dill, 77
CO ₂	9459 Morrison, 77	
C ₂ H ₂	6828 Gryzinski, 75	
CH ₄	6871 Gryzinski, 75	8776 Gianturco, 76
C ₂ H ₄	6828 Gryzinski, 75	
C ₂ H ₆	6828 Gryzinski, 75	6871 Gryzinski, 75
C ₃ H ₈	6871 Gryzinski, 75	

Relative

Ar	8152 Amusia, 76
F	10122 Rescigno, 77
H	7510 Poet, 75
He	8152 Amusia, 76
Kr	9472 Baas, 76
Xe	8152 Amusia, 76
H ₂	7078 Cravens, 75
LiH	9676 Chesnyi, 75
HCN	10015 Mittleman, 65
H ₂ O	10015 Mittleman, 65
NH ₃	10015 Mittleman, 65

IONIZATION EXPERIMENTAL

Normalized

Al	7272 Shimon, 75	7543 Zapesochnyi, 75
----	-----------------	----------------------

ELECTRON CROSS SECTION INDEX

IONIZATION EXPERIMENTAL			IONIZATION EXPERIMENTAL		
Normalized			Normalized		
Ar	7046 Hafidh, 75 7434 Du Bois, 75 7598 Mathis, 76 9012 Vroom, 77 10616 Kennerly, 77	7380 Kurepa, 74 7495 Ogurtsov, 75 8692 Zapesochnyi, 74 10605 Weigold, 77	N ⁺⁺	10750 Crandall, 77	
Ar ⁺	7046 Hafidh, 75		Ne	7616 Jung, 76 10604 Weigold, 77 10745 Mark, 77	8692 Zapesochnyi, 74 10605 Weigold, 77
Ba	6836 Aleksakhin, 75	8461 Chen, 76	O	8490 Haasz, 76 10747 Brook, 77	8724 Haasz, 76
C	10747 Brook, 77		O ⁺	10749 Hasted, 77	
C ⁺	10749 Hasted, 77		O ⁺⁺	10749 Hasted, 77	
C ⁺⁺	10749 Hasted, 77		O ⁺⁺⁺	10750 Crandall, 77	
Ca ⁺	6549 Peart, 75		Rb	6682 Nygaard, 75	
Cs	6682 Nygaard, 75	6994 Postoi, 75	Rb [*]	10012 Korchevoi, 77	
Cs [*]	10012 Korchevoi, 77		Rb ⁺	6549 Peart, 75	7402 Feeney, 75
Cs ⁺	6549 Peart, 75	7402 Feeney, 75	Sr	6686 Aleksakhin, 74	8109 Cher, 76
Ca	7272 Shimon, 75	7543 Zapesochnyi, 75	Sr ⁺	6549 Peart, 75	
H	10025 Weigold, 77		Tl	7272 Shimon, 75	7543 Zapesochnyi, 75
H [*]	6688 Dixon, 75		Tl ⁺	7398 Divine, 76	7402 Feeney, 75
He	8135 Gelebart, 76 8783 Kennerly, 76 9056 Oda, 77 9254 Oda, 75 9802 Madison, 77 10603 Oda, 77 10616 Kennerly, 77 10745 Mark, 77	8378 Beaty, 75 8787 Gelebart, 76 9240 Beaty, 77 9663 Rudd, 77 10480 De Heer, 77 10608 Jost, 77 10744 Schubert, 77	Xe	8692 Zapesochnyi, 74 10604 Weigold, 77	8872 Samson, 76 10745 Mark, 77
He [*]	8959 Dixon, 76		CO	9254 Oda, 75	
In	7272 Shimon, 75	7543 Zapesochnyi, 75	HCl	9344 Mohlmann, 77	
K	6596 Nygaard, 75 6994 Postoi, 75	6682 Nygaard, 75	H ₂	6868 Jung, 75	
K [*]	10012 Korchevoi, 77		N ₂	6868 Jung, 75 7434 Du Bois, 75 7598 Mathis, 76 8724 Haasz, 76	7113 Mark, 75 7538 Mark, 75 8378 Beaty, 75
Kr	8692 Zapesochnyi, 74 10745 Mark, 77	9742 Samoilov, 75	O ₂	7113 Mark, 75 8378 Beaty, 75	7538 Mark, 75
Mg	7030 Karstensen, 75	7599 Leep, 76	CO ₂	10746 Mark, 77	
N	10747 Brook, 77		D ₂ O	7539 Mark, 75	8355 Mark, 76
			H ₂ O	7539 Mark, 75 8355 Mark, 76 9254 Oda, 75	7855 Gomet, 75 9170 Vroom, 77

ELECTRON CROSS SECTION INDEX

IONIZATION			EXPERIMENTAL		IONIZATION			EXPERIMENTAL	
Normalized				Relative					
H ₂ S	10748	Belic, 77		Na	8981	Ross, 76			
BF ₃	7977	Kurepa, 76		Na	8381	Ottley, 76			
NH ₃	7855 Gomet, 75 9674 Wight, 77 10640 Mark, 77	9655 Crowe, 77 9844 Mark, 77		Ne	6527 Weigold, 75 7542 Gordeev, 75 8069 Schmidt, 76 8385 Hamnett, 76		7455 Sharp, 75 7979 Sharp, 75 8153 Johnson, 75 9649 Shchemelinin, 76		
PH ₃	9828 Mark, 77	10641 Mark, 77		Ne ⁺¹	7542 Gordeev, 75				
CH ₄	7120 Winters, 75 9254 Oda, 75	7501 Oda, 75		Ne ⁺⁷	10118 Kallne, 77				
UF ₆	9296 Compton, 77			O ⁺⁵	10118 Kallne, 77				
Relative				Rb	7027	Ross, 75			
				Sr	8980	Schmitz, 76			
				Xe	6619 Kadota, 75 9328 Wight, 77		8153 Johnson, 75		
Ar	6527 Weigold, 75 7422 Marmet, 75 8069 Schmidt, 76 8155 Fryar, 76 8783 Kennerly, 76 10729 Jung, 77	6619 Kadota, 75 7901 Lefaivre, 75 8153 Johnson, 75 8385 Hamnett, 76 9649 Shchemelinin, 76		AgBr	7664	Bernauer, 74			
Ar ⁺²	7992 Drewitz, 76			AgI	7664	Bernauer, 74			
Ar ⁺³	7992 Drewitz, 76			CO	8067 Wight, 76 9061 Dey, 77		9060 Kadota, 77		
Ca	8980 Schmitz, 76			D ₂	6584 Dey, 75				
Cd	9246 Pejcev, 77	10120 Pejcev, 77		H ₂	9340 Weigold, 77				
Cs	6802 Nygaard, 74			KLi	10027 Zmbov, 77				
H	9718 Alguard, 77			N ₂	8067 Wight, 76 9060 Kadota, 77 10353 Stockdale, 77		8962 Wilden, 76 9846 Weigold, 77 10450 Ricard, 77		
He	6644 Dillon, 75 6879 Weigold, 75 7499 Weigold, 75 8385 Hamnett, 76 9649 Shchemelinin, 76	6859 Spence, 75 7497 Suzuki, 75 8069 Schmidt, 76 9448 Dillon, 77		NO	6861 Marmet, 75		9060 Kadota, 77		
K	6650 Aleksakhin, 75 10727 Kavei, 77	7493 Ottley, 75		NaK	10027 Zmbov, 77				
Kr	6527 Weigold, 75 7502 Guidoni, 75	6619 Kadota, 75 8153 Johnson, 75		NaLi	10027 Zmbov, 77				
Mg	9826 Pejcev, 77	10728 Ottley, 77		O ₂	6861 Marmet, 75		9060 Kadota, 77		
N ⁺⁴	10118 Kallne, 77			CO ₂	7502 Guidoni, 75		10163 Bussieres, 77		
				H ₂ O	8380 Brion, 75		9343 Dixon, 77		
				H ₂ S	8411 Balkis, 76				
				H ₂ Se	8411 Balkis, 76				

ELECTRON CROSS SECTION INDEX

IONIZATION EXPERIMENTAL

IONIZATION THEORETICAL

Relative

Normalized

H ₂ Te	8411 Balkis, 76	
N ₂ O	8158 Koppe, 76	8733 Fukui, 75
O ₃	10643 Siegel, 77	
H ₂ CO	8462 Hood, 76	
NH ₃	8352 Hood, 76	8380 Brion, 75
CH ₄	7127 Milhaud, 75 8080 Backx, 75 8353 Weigold, 76	7595 Van Der Wiel, 76 8157 Selim, 75
UF ₅	10176 Hildenbrand, 77	
SF ₆	10606 Stefani, 77	
C ₂ H ₆	9473 Dey, 76 10444 Selim, 76	9656 Suzuki, 77

IONIZATION THEORETICAL

Normalized

Al ⁺¹¹	6725 Chibisov, 75	
Ar	7494 Ogurtsov, 75 7544 Langenberg, 75 8788 Chandra, 76	7506 Tancic, 75 8396 Amusia, 76 9841 Hahn, 77
Ar [*]	9058 Ton-That, 77	
Ar ⁺³	8936 Salop, 76	10006 Hahn, 77
Ar ⁺⁴	8936 Salop, 76	
Ar ⁺⁵	8936 Salop, 76	
Ar ⁺⁶	8936 Salop, 76	
Ar ⁺⁷	8936 Salop, 76	
Ar ⁺¹⁶	6725 Chibisov, 75	
B ⁺³	6592 Chandra, 75 10161 Chandra, 76	6725 Chibisov, 75
Ba	8613 Tripathi, 74	

Be	8613 Tripathi, 74	
Be ⁺²	6725 Chibisov, 75	
C ⁺¹	8788 Chandra, 76	8936 Salop, 76
C ⁺²	8936 Salop, 76	
C ⁺³	8936 Salop, 76	9841 Hahn, 77
C ⁺⁴	6725 Chibisov, 75	8936 Salop, 76
C ⁺⁵	8936 Salop, 76	
Ca	8613 Tripathi, 74	9665 McGuire, 77
Ca ⁺¹	9666 McGuire, 77	
Cd	9665 McGuire, 77	
Cl ^{+1.5}	6725 Chibisov, 75	
Cr	9665 McGuire, 77	
F ⁺⁷	6725 Chibisov, 75	
Fe	9665 McGuire, 77	
Fe ⁺⁸	9841 Hahn, 77	
Fe ⁺¹⁶	9841 Hahn, 77	
Ge	9665 McGuire, 77	
H	6554 Bates, 75 8111 Narumi, 75	7541 McGuire, 75 8317 Jain, 76
H ⁻	6725 Chibisov, 75	
He	6685 Robb, 75 7269 Bell, 75 7541 McGuire, 75 8108 Kim, 75 8383 Jusick, 67 10617 Senashenko, 77	6725 Chibisov, 75 7498 Shelton, 75 7898 Burnett, 76 8379 Kim, 75 10480 De Heer, 77
He [*]	9243 Ton-That, 77	
He ⁺¹	7888 Boesten, 76 9055 Boesten, 76	8616 Khare, 73
Hg	8788 Chandra, 76	
K	9665 McGuire, 77	

ELECTRON CROSS SECTION INDEX

IONIZATION		THEORETICAL		IONIZATION		THEORETICAL	
Normalized				Normalized			
K^{+1}	8788 Chandra, 76		9666 McGuire, 77	Ne^{+5}	8936 Salop, 76		
Kr	7540 Amusia, 75 9665 McGuire, 77		8788 Chandra, 76	Ne^{+6}	8936 Salop, 76		
Kr^*	9058 Ton-That, 77			Ne^{+7}	8936 Salop, 76		
Li^{+1}	6592 Chandra, 75 8295 Narain, 74		6725 Chibisov, 75 10161 Chandra, 76	Ne^{+8}	6592 Chandra, 75 8936 Salop, 76		6725 Chibisov, 75 10161 Chandra, 76
Mg	8613 Tripathi, 74			Ni	9665 McGuire, 77		
Mg^{+1}	9666 McGuire, 77			O	8615 Padalia, 73		9666 McGuire, 77
Mg^{+2}	9666 McGuire, 77			O^{+1}	8788 Chandra, 76 9666 McGuire, 77		8936 Salop, 76
Mg^{+10}	6592 Chandra, 75 10161 Chandra, 76		6725 Chibisov, 75	O^{+2}	8788 Chandra, 76 9666 McGuire, 77		8936 Salop, 76
Mo	9665 McGuire, 77			O^{+3}	8936 Salop, 76		
Mo^{+24}	9447 Hahn, 77			O^{+4}	8936 Salop, 76		
N	9666 McGuire, 77			O^{+5}	8936 Salop, 76		
N^{+1}	8936 Salop, 76		9666 McGuire, 77	O^{+6}	6592 Chandra, 75 8936 Salop, 76		6725 Chibisov, 75 10161 Chandra, 76
N^{+2}	8788 Chandra, 76 9666 McGuire, 77		8936 Salop, 76	O^{+7}	8936 Salop, 76		
N^{+3}	8936 Salop, 76			P^{+13}	6725 Chibisov, 75		
N^{+4}	8936 Salop, 76		9841 Hahn, 77	Pd	9665 McGuire, 77		
N^{+5}	6725 Chibisov, 75		8936 Salop, 76	Rb	9665 McGuire, 77		
N^{+6}	8936 Salop, 76			Rb^{+1}	9666 McGuire, 77		
Na^{+1}	9666 McGuire, 77			S^{+14}	6725 Chibisov, 75		
Na^{+9}	6725 Chibisov, 75			Se	9665 McGuire, 77		
Ne	9841 Hahn, 77			Si^{+12}	6725 Chibisov, 75		
Ne^*	9058 Ton-That, 77			Sn	9665 McGuire, 77		
Ne^{+1}	8936 Salop, 76		9666 McGuire, 77	Sr	8613 Tripathi, 74		9665 McGuire, 77
Ne^{+2}	8936 Salop, 76			Te	9665 McGuire, 77		
Ne^{+3}	8936 Salop, 76		9841 Hahn, 77	Ti	9665 McGuire, 77		
Ne^{+4}	8936 Salop, 76			U	8078 Maceda, 75		

ELECTRON CROSS SECTION INDEX

IONIZATION			THEORETICAL			IONIZATION			THEORETICAL		
Normalized						Relative					
Xe	7540 Amusia, 75 8788 Chandra, 76		8396 Amusia, 76 9665 McGuire, 77			He	8066 Baluja, 76 9329 Morgenstern, 77		8274 Dixon, 76 9330 Read, 77		
Xe ⁺	9058 Ton-That, 77					K	10117 Kunc, 77				
Zn	9665 McGuire, 77					Kr	8716 Tweed, 76				
Zr	9665 McGuire, 77					Li	10117 Kunc, 77				
CO	7881 Parikh, 75 8788 Chandra, 76		8317 Jain, 76			N	6584 Dey, 75				
CO ⁺	9058 Ton-That, 77					Na	9366 Theodosiou, 77		10117 Kunc, 77		
H ₂	7881 Parikh, 75		8788 Chandra, 76			Ne	10006 Hahn, 77				
N ₂	6791 Chandra, 75 8108 Kim, 75 8379 Kim, 75 8788 Chandra, 76		7881 Parikh, 75 8317 Jain, 76 8384 Stolarski, 67 9508 Khare, 77			Xe	8716 Tweed, 76				
N ₂ ⁺	9058 Ton-That, 77					BH	6882 Levin, 75				
NO	7881 Parikh, 75		8788 Chandra, 76			CH	6882 Levin, 75				
O ₂	6791 Chandra, 75 8382 Watson, 67		7881 Parikh, 75 8788 Chandra, 76			F ₂	6882 Levin, 75				
CO ₂	8317 Jain, 76					HF	6882 Levin, 75				
H ₂ O	8317 Jain, 76					H ₂	7078 Cravens, 75				
NH ₃	8317 Jain, 76					LiH	6882 Levin, 75				
CH ₄	7500 Jain, 75 10160 Chandra, 76		8317 Jain, 76			Li ₂	6882 Levin, 75				
C ₂ H ₄	10159 Jain, 76					N ₂	6882 Levin, 75				
C ₂ H ₆	10159 Jain, 76		10160 Chandra, 76			H ₂ O	9476 Williams, 77				
C ₃ H ₈	10160 Chandra, 76					CH ₄	8720 Levin, 76				
C ₆ H ₆	10160 Chandra, 76					C ₂ H ₆	9473 Dey, 76				
						DETACHMENT THEORETICAL					
						Normalized					
Relative											
Ar	8716 Tweed, 76					F ⁻	9131 Ormonde, 77				
Cs	10117 Kunc, 77					H ⁻	8022 Chandra, 75 8268 Narain, 76		8134 Chandra, 75 8788 Chandra, 76		
Fe ^{+R}	10006 Hahn, 77					K ⁻	6869 Narain, 74 8134 Chandra, 75		7145 Narain, 75		

ELECTRON CROSS SECTION INDEX

DETACHMENT THEORETICAL

ELECTRONIC EXCITATION EXPERIMENTAL

Normalized

Li⁻ 6869 Narain, 74 7145 Narain, 75
8134 Chandra, 75

Na⁻ 6869 Narain, 74 7145 Narain, 75
8134 Chandra, 75

ELECTRONIC EXCITATION EXPERIMENTAL

Normalized

Al 7128 Shimon, 75

Ar 7431 Copley, 75 7504 De Jongh, 71
8479 Mentall, 76 10621 Chutjian, 77

Ar⁺¹ 8479 Mentall, 76

Ba 6836 Aleksakhin, 75 7551 Aleksakhin, 75
8461 Chen, 76

Ba⁺¹ 8738 Zapesochnyi, 76

Bi 6700 Williams, 75

C⁺³ 9962 Taylor, 77 10751 Taylor, 77

Ca⁺¹ 7395 Kelman, 75 8738 Zapesochnyi, 76

Cs 8029 Zapesochnyi, 76

Cu 10023 Trajmar, 77 10624 Trajmar, 77

Ga 6651 Nepipov, 75 7129 Shimon, 75

H 6952 Williams, 75 7513 Elston, 75
7515 Williams, 75 7600 Mahan, 76
8315 Williams, 76

He 6563 Klump, 75 6608 Dillon, 75
6648 Ferendeci, 75 6649 Chutjian, 75
6691 Bogdanova, 75 6812 Showalter, 75
6832 Pichou, 75 6944 Dillon, 75
7271 Chutjian, 75 7387 Baltayan, 76
7420 Spence, 75 7504 De Jongh, 71
7520 Joyez, 75 7531 Westerveld, 75
7533 Yagishita, 75 7537 Chutjian, 75
8026 Yagishita, 76 8267 Pichou, 76
8494 Chutjian, 76 8787 Gelebart, 76
8937 Huetz, 76 8985 Wine, 76
9664 Schiavone, 77 10480 De Heer, 77

Normalized

He 10608 Jost, 77

He⁻ 10756 Khakhaev, 77

Hg 9827 Borst, 77 10358 Semenova, 77

Hg⁺¹ 6699 Crandall, 75 7445 Taylor, 75
8917 Phaneuf, 76

Hg⁺² 8917 Phaneuf, 76

In 6651 Nepipov, 75

K 8029 Zapesochnyi, 76 9679 Williams, 77

Kr 7401 Pavlov, 75 7504 De Jongh, 71
10620 Srivastava, 77

Kr⁻ 10229 Shaw, 77

Kr⁺¹ 9742 Samoilov, 75

Kr⁺² 6834 Imre, 74

Li 7547 Williams, 75 8029 Zapesochnyi, 76
8316 Williams, 76

Mg 7549 Leep, 75 7599 Leep, 76

Mg⁺¹ 7444 Zapesochnyi, 75 7549 Leep, 75
8738 Zapesochnyi, 76 9958 Kelman, 75

N⁺¹ 8490 Haasz, 76

Na 6858 Pohl, 75 8029 Zapesochnyi, 76
9651 Shuttleworth, 77

Na⁻ 9169 Hermann, 77

Ne 7504 De Jongh, 71 10005 Samson, 77
10352 Bogdanova, 77

Ne⁺² 9677 Samoilov, 77

Ne⁺⁴ 9662 Samoilov, 76

Ne⁺⁵ 9662 Samoilov, 76

O⁺¹ 8490 Haasz, 76

Pb 6599 Williams, 75

Rb 8029 Zapesochnyi, 76

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION EXPERIMENTAL

ELECTRONIC EXCITATION EXPERIMENTAL

Normalized

Relative

Sr	8109 Chen, 76	
Sr [*]	9804 Aleksakhin, 77	
Sr ⁺¹	7444 Zapesochnyi, 75	8738 Zapesochnyi, 76
Tl	9219 Chen, 77	10084 Shimon, 73
Xe	6646 Williams, 75	7401 Pavlov, 75
Xe ⁺¹	7394 Samoilov, 75	
Xe ⁺²	7304 Hertz, 75	
Zn	6878 Williams, 75	7553 Bozinis, 75
CO	10011 Van Sprang, 77	
H ₂	7387 Baltayan, 76 10443 Anderson, 77	8784 Mohlmann, 76
N ₂	8192 Finn, 76 9913 Cartwright, 77 10593 Cartwright, 77	9854 Cartwright, 77 9952 Chutjian, 77 10638 Mentall, 77
NO	7114 Imami, 75 9837 Mohlmann, 77	7463 Borst, 75
O ₂	6993 Hall, 75 10594 Wakiya, 77	7464 Hall, 75
O ₂ [*]	6993 Hall, 75	
HCN	10158 Chutjian, 77	
N ₂ O ⁺¹	9017 Gerzanich, 76	
C ₂ H ₂	6542 Beenakker, 75	
CH ₄	6542 Beenakker, 75	
C ₂ H ₄	6542 Beenakker, 75	
SF ₆	9832 Trajmar, 77	10723 Trajmar, 77
UF ₆	8641 Srivastava, 76	
C ₂ H ₆	6542 Beenakker, 75	
C ₆ H ₆	10010 Klump, 77	

Ar	6541 Lewis, 75 7594 Tsuboi, 76 8692 Zapesochnyi, 74 10179 Cooper, 77	6867 Roy, 75 8621 Brunt, 76 10030 Brunt, 77
Ar ⁺¹	8943 Rosner, 76	
Ba	10753 Aleksakhin, 77	
Eu	9262 Goldovskii, 76	
H	7516 Williams, 75	7975 Freund, 76
He	6835 Mityureva, 75 6992 Eminyan, 75 7405 King, 75 7458 Westerveld, 75 7496 Bolduc, 75 7532 Andrick, 75 8588 Van Ittersum, 76 9013 Heddle, 77 9190 Zajonc, 77 9293 Tan, 77 9458 Roy, 77	6859 Spence, 75 7025 Lott III, 75 7457 King, 75 7459 Spence, 75 7521 Huetz, 75 8239 McFarland, 63 8940 Heideman, 76 9059 Ugbabe, 77 9191 Keesing, 77 9298 Brunt, 77 10740 Brunt, 77
Hg	8028 Hanne, 76 9261 Krause, 77	8357 Shpenik, 76
K	7591 Eyb, 76	8779 Slavik, 76
Kr	6541 Lewis, 75 8621 Brunt, 76 8790 Roy, 76 10030 Brunt, 77 10179 Cooper, 77 10730 Srivastava, 77	7545 Delage, 75 8692 Zapesochnyi, 74 9660 Roy, 76 10178 Delage, 77 10629 Al-Shamma, 77 10738 Brunt, 77
Li	8779 Slavik, 76	9717 Kocher, 77
Mg	10754 Shpenik, 77	
Na	7548 Shuttleworth, 75	10590 Shuttleworth, 77
Ne	6835 Mityureva, 75 7456 Carette, 75 8621 Brunt, 76 9059 Ugbabe, 77 10179 Cooper, 77 10743 Van De Water, 77	6907 Roy, 75 8395 Veillette, 76 8692 Zapesochnyi, 74 10030 Brunt, 77 10739 Jureta, 77
Ne ⁺¹	6835 Mityureva, 75	
Tl	8463 Shimon, 76	

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION EXPERIMENTAL

Relative		
Xe	8621 Brunt, 76 8913 Delage, 76 9660 Roy, 76 10030 Brunt, 77	8692 Zapesochnyi, 74 9479 Delage, 77 9719 Jimenez, 76 10179 Cooper, 77
Xe ⁺¹	8943 Rosner, 76	
CO	8722 Fukui, 76 9260 Reinhardt, 72	9259 Brion, 72
He ₂	8253 Bogdanova, 75	
N ₂	7505 Mandelbaum, 74 9399 Ravodina, 76 10589 Veillette, 77 10722 Vichon, 77	8283 Estler, 76 10450 Ricard, 77 10721 Burns, 77
N ₂ ⁺¹	8251 Mandelbaum, 76	
NO	8733 Fukui, 75	10722 Vichon, 77
O ₂	8918 Trajmar, 76	
CS ₂	8733 Fukui, 75	
H ₂ O	7146 Tsurubuchi, 75	
N ₂ O	7462 Gerzanich, 75	9042 Dance, 76
NO ₂	8733 Fukui, 75	
C ₂ H ₂	8561 Van Veen, 76	
H ₂ CO	8960 Van Veen, 76	
NH ₃	10119 Johnson, 77	
C ₂ F ₄	8785 Coggiola, 76	
C ₂ H ₄	8492 Van Veen, 76	
C ₆ H ₆	6799 Azria, 75 6830 Smyth, 74 10026 Frueholz, 77	6829 Smyth, 74 7424 Smyth, 74

ELECTRONIC EXCITATION THEORETICAL

Normalized

Al 6873 Wells, 75

ELECTRONIC EXCITATION THEORETICAL

Normalized

Al ⁺¹¹	8737 Kepple, 76	
Ar	6698 Albat, 75 7583 Mileev, 76 10619 Mileev, 77	7115 Bonham, 69 8399 Amusia, 75
Ar ⁺⁹	6561 Czyzak, 74	
Ar ⁺¹⁰	6561 Czyzak, 74	
Ar ⁺¹¹	6561 Czyzak, 74	
Ar ⁺¹²	6561 Czyzak, 74	
Ar ⁺¹³	6561 Czyzak, 74	
Ar ⁺¹⁵	10351 Gau, 77	
As	7115 Bonham, 69	
B	6652 Sinanoglu, 75	7115 Bonham, 69
B ⁺³	9801 McDowell, 77	9833 Bhatia, 77
Be	6607 Williamson Jr., 75	6652 Sinanoglu, 75
Be ⁺¹	9607 Hayes, 77	
Be ⁺²	9801 McDowell, 77	9833 Bhatia, 77
Be ⁺³	8313 Bransden, 76 10039 Baluja, 77	9801 McDowell, 77
Br	7115 Bonham, 69	
C	7115 Bonham, 69 9016 Pindzola, 77	7385 Thomas, 75 9238 Le Dourneuf, 77
C ⁺¹	9367 Tamba, 77	
C ⁺²	9460 Berrington, 77	9808 Nakazaki, 77
C ⁺³	9238 Le Dourneuf, 77 10351 Gau, 77	10124 Callaway, 77 10752 Callaway, 77
C ⁺⁴	9044 Nakazaki, 76 9833 Bhatia, 77	9801 McDowell, 77
C ⁺⁵	8493 Mitra, 76 9961 Hayes, 77	9801 McDowell, 77 10039 Baluja, 77
Ca	7552 Damburg, 75	9295 Srivastava, 77
Ca ⁺¹¹	6561 Czyzak, 74	

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION THEORETICAL

Normalized

Ca ⁺¹²	6561 Czyzak, 74	
Ca ⁺¹³	6561 Czyzak, 74	
Ca ⁺¹¹	6561 Czyzak, 74	
Ca ⁺¹⁵	6561 Czyzak, 74	
Ca ⁺¹⁸	6598 Jones, 75 9833 Bhatia, 77	9801 McDowell, 77
Ca ⁺¹⁹	10039 Baluja, 77	
Cd	8056 Tiwary, 76	9295 Srivastava, 77
Cl	7115 Bonham, 69	
Cl ⁺⁸	6561 Czyzak, 74	
Cl ⁺⁹	6561 Czyzak, 74	
Cl ⁺¹⁰	6561 Czyzak, 74	
Cl ⁺¹¹	6561 Czyzak, 74	
Cl ⁺¹²	6561 Czyzak, 74	
Co	7115 Bonham, 69	
Co ⁺¹¹	6561 Czyzak, 74	
Cs	6748 Tiwary, 75 8955 Fabrikant, 76	6789 Greene, 74 9470 Srivastava, 77
F	7115 Bonham, 69	
F ⁺⁷	9801 McDowell, 77	9833 Bhatia, 77
Fe	7115 Bonham, 69	
Fe ⁺⁸	8914 Davis, 76	
Fe ⁺¹¹	8914 Davis, 76	
Fe ⁺¹⁶	8914 Davis, 76	
Fe ⁺¹⁸	8914 Davis, 76	
Fe ⁺¹⁹	8914 Davis, 76	
Fe ⁺²²	8914 Davis, 76	
Fe ⁺²³	8914 Davis, 76	

ELECTRONIC EXCITATION THEORETICAL

Normalized

Fe ⁺²¹	6598 Jones, 75 9801 McDowell, 77	8914 Davis, 76 9833 Bhatia, 77
Fe ⁺²⁵	10039 Baluja, 77	
H	6505 Jamieson, 75 6552 Callaway, 75 6702 Brandt, 75 6796 Saha, 75 6838 McDowell, 75 6995 Stauffer, 75 7391 Syms, 75 7573 Byron Jr., 75 7856 Gau, 75 8057 Kingston, 76 8238 Felden, 71 8270 Roberts, 76 8333 Burke, 74 8590 Calhoun, 76 8782 Callaway, 76 9019 Reid, 77 9040 Chan, 77 9292 Scott, 77 9507 Roberts, 77 10009 Foster, 77 10022 Morgan, 77 10612 Srivastava, 77	6510 Pindzola, 75 6647 Junker, 75 6750 McDowell, 75 6821 Bransden, 75 6954 Callaway, 75 7115 Bonham, 69 7511 Fon, 75 7574 McDowell, 75 7857 Byron Jr., 76 8156 Krotkov, 75 8240 Chandra, 74 8313 Bransden, 76 8449 Rahman, 76 8726 Bransden, 76 8871 Saha, 76 9022 Sullivan, 72 9256 Abdallah Jr., 74 9456 Ghosh, 77 9822 Simony, 77 10020 Lal, 77 10609 Khayrallah, 77 10614 Winters, 77
H ⁺	8054 Gee, 76 9821 Takayanagi, 77	9819 Toshima, 77 9843 Toshima, 77
H ⁺¹	7122 Smith, 75	
He	6544 Narain, 75 6559 Flannery, 75 6742 Bransden, 75 6793 Buckley, 75 6821 Bransden, 75 6988 Nesbet, 75 7115 Bonham, 69 7126 Flannery, 75 7423 Lins De Barros, 75 7519 Byron Jr., 75 7535 Ochkur, 75 8027 Sinfailam, 76 8330 Roy, 76 8335 Nesbet, 74 8399 Amusia, 75 8942 Shevelko, 76 9341 Felden, 77 9475 Winters, 77 10035 Joachain, 77 10113 Kennedy, 68 10613 Joachain, 77	6557 Herzenberg, 75 6649 Chutjian, 75 6792 Flannery, 75 6810 Berrington, 75 6839 Scott, 75 6998 Byron Jr., 75 7118 Chan, 75 7404 Scott, 75 7518 Lins De Barros, 75 7534 Brandi, 75 7536 Nesbet, 75 8197 Bransden, 76 8334 Thomas, 74 8383 Jusick, 67 8623 Scott, 76 9171 Felden, 76 9398 Kets, 77 9838 Kulander, 77 10088 Jackman, 77 10480 De Heer, 77 10615 Ochkur, 77

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION THEORETICAL			ELECTRONIC EXCITATION THEORETICAL		
Normalized			Normalized		
He	9243 Ton-That, 77		N ⁺³	6547 Hayes, 75	8272 Van Wyngaarden, 76
He ⁺¹	6597 Narumi, 75 6995 Stauffer, 75 7392 Ishihara, 75 8254 Weatherford, 76 8493 Mitra, 76 9345 Mitra, 76 9961 Hayes, 77 10113 Kennedy, 68	6750 McDowell, 75 7391 Syms, 75 7801 Ishihara, 75 8313 Bransden, 76 8591 Henry, 76 9801 McDowell, 77 10039 Baluja, 77	N ⁺⁵	9044 Nakazaki, 76 9833 Bhatia, 77	9801 McDowell, 77
Hg	9295 Srivastava, 77	10034 Yamazaki, 77	N ⁺⁶	9801 McDowell, 77	
K	6748 Tiwary, 75 8271 Moores, 76 9470 Srivastava, 77 10622 Lins De Barros, 77	6789 Greene, 74 8366 Brandus, 76 10038 Kennedy, 77	N ⁺⁸	9044 Nakazaki, 76	
K ⁺¹⁰	6561 Czyzak, 74		Na	6789 Greene, 74 10038 Kennedy, 77 10622 Lins De Barros, 77	8366 Brandus, 76 10355 Roy, 77
K ⁺¹¹	6561 Czyzak, 74		Na ⁺	9478 Percival, 77	
K ⁺¹²	6561 Czyzak, 74		Ne	6692 Lins De Barros, 75 7583 Mileev, 76	7115 Bonham, 69 10619 Mileev, 77
K ⁺¹³	6561 Czyzak, 74		Ne ⁺¹	6556 Seaton, 75	
K ⁺¹⁴	6561 Czyzak, 74		Ne ⁺²	6556 Seaton, 75	
Kr	7115 Bonham, 69	8399 Amusia, 75	Ne ⁺⁶	9808 Nakazaki, 77	
Li	6789 Greene, 74 8366 Brandus, 76 10623 Lins De Barros, 77	8024 Kumar, 76 10038 Kennedy, 77	Ne ⁺⁷	8789 Van Wyngaarden, 76	10123 Peek, 77
Li ⁺	10623 Lins De Barros, 77		Ne ⁺⁸	9801 McDowell, 77	9833 Bhatia, 77
Li ⁺¹	7442 Bhatia, 75 8480 Das, 76 9833 Bhatia, 77	7719 Vainshtein, 75 9801 McDowell, 77	Ne ⁺⁹	9801 McDowell, 77 10039 Baluja, 77	9961 Hayes, 77
Li ⁺²	8493 Mitra, 76	9961 Hayes, 77	Ni	7115 Bonham, 69	
Mg	7550 Robb, 75	9295 Srivastava, 77	Ni ⁺¹⁴	6561 Czyzak, 74	
Mg ⁺¹	6880 Kelman, 75		Ni ⁺²¹	8914 Davis, 76	
N	7115 Bonham, 69 7508 Thomas, 75 7897 Berrington, 75	7419 Thomas, 75 7509 Le Dourneuf, 75 8333 Burke, 74	O	6509 Thomas, 75 7399 Smith, 76 7590 Davis, 75 8786 Le Dourneuf, 76 10088 Jackman, 77	7115 Bonham, 69 7507 Julienne, 75 8592 McGuire, 76 9803 Rountree, 77
N ⁺¹	6556 Seaton, 75 7530 Smith, 75	6595 Robb, 75 9238 Le Dourneuf, 77	O ⁺¹	7590 Davis, 75 8780 Pradhan, 76	7887 Pradhan, 76
N ⁺³	9808 Nakazaki, 77		O ⁺²	6556 Seaton, 75	9457 Pindzola, 77
			O ⁺⁴	7719 Vainshtein, 75 9808 Nakazaki, 77	9460 Berrington, 77
			O ⁺⁵	6743 Presnyakov, 75	7400 Presnyakov, 75
			O ⁺⁶	7592 Nakazaki, 76	7719 Vainshtein, 75

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION THEORETICAL

ELECTRONIC EXCITATION THEORETICAL

Normalized

Normalized

O^{+6}	9801 McDowell, 77	9833 Bhatia, 77
O^{+7}	9044 Nakazaki, 76 10039 Baluja, 77	9801 McDowell, 77
P	7115 Bonham, 69	
Rb	6748 Tiwary, 75	9470 Srivastava, 77
Ru	6789 Greene, 74	
S	7115 Bonham, 69	
S^{+1}	8780 Pradhan, 76	
S^{+7}	6561 Czyzak, 74	
S^{+8}	6561 Czyzak, 74	
S^{+9}	6561 Czyzak, 74	
S^{+10}	6561 Czyzak, 74	
S^{+11}	6561 Czyzak, 74	
Si	7115 Bonham, 69	9016 Pindzola, 77
Si^{+5}	9955 Davis, 77	
Si^{+6}	9955 Davis, 77	
Si^{+7}	9955 Davis, 77	
Si^{+8}	9955 Davis, 77	
Si^{+9}	8781 Dankwort, 76	9955 Davis, 77
Si^{+10}	9955 Davis, 77	
Si^{+11}	9955 Davis, 77	
Si^{+12}	6598 Jones, 75 9833 Bhatia, 77	9801 McDowell, 77 9955 Davis, 77
Si^{+13}	9955 Davis, 77	10039 Baluja, 77
Sr	9295 Srivastava, 77	
Sr^{+1}	7416 Dashchenko, 75	
Ti	7115 Bonham, 69	
U	8078 Maceda, 75	

V	7115 Bonham, 69	
Xe	7546 Amusia, 75	8399 Amusia, 75
Zn	8056 Tiwary, 76	9295 Srivastava, 77
CO	10088 Jackman, 77	
F_2	9331 Rescigno, 77	
H_2	7396 Rescigno, 75 9063 Liu, 77	7397 Rescigno, 76 9245 Domenicucci, 77
N_2	8384 Stolarski, 67 10088 Jackman, 77	9245 Domenicucci, 77
OH	8731 Chu, 76	
O_2	8382 Watson, 67 10088 Jackman, 77	9245 Domenicucci, 77
CO_2	10088 Jackman, 77	
H_2CO	6562 Miller, 75	

Relative

Ar	7076 King, 75	10087 Green, 77
Ca^{+1}	7445 Taylor, 75	
Cs	10117 Kunc, 77	
Fe^{+5}	7443 Robb, 75	
H	7403 Morgan, 75 7510 Poet, 75 10174 Blum, 77	7425 Doolen, 74 10085 Calhoun, 77 10611 Shelton, 77
He	7076 King, 75 10087 Green, 77	8077 Roy, 76
Hg^{+1}	7445 Taylor, 75	
K	10117 Kunc, 77	
Li	10117 Kunc, 77	
N	7076 King, 75	
Na	10117 Kunc, 77	

ELECTRON CROSS SECTION INDEX

ELECTRONIC EXCITATION THEORETICAL

Relative		
O	7418 Tambe, 74 10087 Green, 77	7887 Pradhan, 76
O ⁺²	8337 Seaton, 74	
O ⁺¹	7899 Malinovsky, 75	
Xe	9719 Jimenez, 76	10447 Amusia, 76
CO	10087 Green, 77	
D ₂	7466 Eyb, 75	
H ₂	7078 Cravens, 75	10087 Green, 77
N ₂	10016 Khare, 77	10087 Green, 77
N ₂ ⁺¹	7445 Taylor, 75	
O ₂	10029 Chang, 77	10087 Green, 77
O ₂ ⁺¹	10016 Khare, 77	
CO ₂	10087 Green, 77	
H ₂ O	10087 Green, 77	

DE-EXCITATION EXPERIMENTAL

Normalized	
Cd	8252 Korotkov, 75
Xe	8963 Keto, 76
C _n H _n	6696 Beenakker, 74
Relative	
Na [*]	8979 Hertel, 76
Ne	10759 Leveau, 77
C _n H _n	6697 Beenakker, 74

DE-EXCITATION THEORETICAL

Normalized	
He [*]	10013 Gulyaev, 76
Hg [*]	10014 Korotkov, 75
Relative	
Cs	10117 Kunc, 77
K	10117 Kunc, 77
Li	10117 Kunc, 77
Na	10117 Kunc, 77

DISSOCIATION EXPERIMENTAL

Normalized		
D ₂	10164 Mohlmann, 77	10632 Mohlmann, 77
H ₂	7524 Khayrallah, 75 8920 Hartfuss, 76 10632 Mohlmann, 77	8266 Khayrallah, 76 10164 Mohlmann, 77
N ₂	7505 Mandelbaum, 74	
O ₂	10638 Mentall, 77	
CS ₂	10757 Miletic, 77	
H ₃ ⁺¹	6870 Peart, 75	
C ₂ H ₂	6542 Beenakker, 75 7460 Koval, 75 9062 Mohlmann, 77	6694 Beenakker, 74 7526 Mohlmann, 75
CH ₄	6542 Beenakker, 75 7460 Koval, 75 8957 Mohlmann, 76 9255 Koppe, 76	7120 Winters, 75 7526 Mohlmann, 75 9062 Mohlmann, 77
C ₂ H ₄	6542 Beenakker, 75 7526 Mohlmann, 75	7460 Koval, 75 9062 Mohlmann, 77
C ₂ H ₆	6542 Beenakker, 75 7526 Mohlmann, 75	7460 Koval, 75 9062 Mohlmann, 77
C ₃ H ₆	7460 Koval, 75	

ELECTRON CROSS SECTION INDEX

DISSOCIATION EXPERIMENTAL			DISSOCIATION EXPERIMENTAL		
Normalized			Relative		
C_3H_8	7460 Koval, 75	7526 Mohlmann, 75	C_2N_2	7433 Tokue, 75	10639 Kondow, 77
C_6H_6	6695 Beenakker, 74	8920 Hartfuss, 76	H_2CO	7525 Polyakova, 75	
Relative			NH_3	8915 Mohlmann, 76 9674 Wight, 77	9393 Tsurubuchi, 77
			CH_4	8157 Selim, 75 9393 Tsurubuchi, 77 9469 Schiavone, 77	8915 Mohlmann, 76 9468 Donohue, 77 10008 Hartfuss, 77
H	9394 Khayrallah, 77		$SiCl_4$	10121 Olsen, 77	
CO	6788 Kollmann, 75 7305 Loch, 75	7049 Hirsch, 75	C_2H_4	9468 Donohue, 77	9469 Schiavone, 77
CO^{+1}	7305 Loch, 75		C_2H_6	9468 Donohue, 77	9469 Schiavone, 77
D_2	7900 Backx, 76 10634 Polyakova, 77 10637 Hartfuss, 77	9834 Carnahan, 77 10635 Polyakova, 77	C_6H_6	7424 Smyth, 74	10637 Hartfuss, 77
HCl	8915 Mohlmann, 76	9393 Tsurubuchi, 77	DISSOCIATION THEORETICAL		
HD	7900 Backx, 76	9834 Carnahan, 77			
H_2	6788 Kollmann, 75 7900 Backx, 76 9393 Tsurubuchi, 77 9959 Polyakova, 76 10631 Ito, 77 10634 Polyakova, 77 10637 Hartfuss, 77	6790 Schiavone, 75 8915 Mohlmann, 76 9834 Carnahan, 77 10630 Hazi, 77 10633 Kollmann, 77 10635 Polyakova, 77	Normalized		
HeH^{+1}	10642 Comtet, 77				
N_2	8964 Wells, 76		H_2	7116 Chung, 75	7397 Rescigno, 76
O_2	7522 Stone, 75		H_2^{+1}	8870 Rai Dastidar, 76	
BrCN	7433 Tokue, 75	10639 Kondow, 77	HeH^{+1}	8194 Rai Dastidar, 76	
CO_2	6693 Misakian, 75	8717 Allcock, 76	H_2O	9650 Fujita, 77 10636 Fujita, 77	9654 Fujita, 77
D_2O	10637 Hartfuss, 77		Relative		
HCN	7377 Korol, 75 10639 Kondow, 77	7433 Tokue, 75			
H_2O	8915 Mohlmann, 76 10631 Ito, 77	9393 Tsurubuchi, 77 10637 Hartfuss, 77	H_2	7078 Cravens, 75	
N_2O	8733 Fukui, 75		CO_2	9716 Capezzuto, 76	
NO_2	8733 Fukui, 75		DISSOCIATIVE IONIZATION EXPERIMENTAL		
OCS	7095 Van Brunt, 75		Normalized		
			N_2	8724 Haasz, 76	

ELECTRON CROSS SECTION INDEX

DISSOCIATIVE IONIZATION EXPERIMENTAL

DISSOCIATIVE IONIZATION THEORETICAL

Normalized

Normalized

O ₂	8724 Haasz, 76	10638 Mentall, 77
CS ₂	10757 Miletic, 77	
H ₂ O	7855 Gomet, 75	
BCl ₃	7046 Hafidh, 75	
NH ₃	7855 Gomet, 75 10640 Mark, 77	9655 Crowe, 77
PH ₃	10641 Mark, 77	

CO	7881 Parikh, 75
H ₂	7881 Parikh, 75
N ₂	7881 Parikh, 75
NO	7881 Parikh, 75
O ₂	7881 Parikh, 75

Relative

Relative

H ₂	10449 Green, 77
----------------	-----------------

AgBr	7664 Bernauer, 74
------	-------------------

AgI	7664 Bernauer, 74
-----	-------------------

DISSOCIATIVE ATTACHMENT EXPERIMENTAL

Normalized

CO	7527 Locht, 75 9477 Locht, 77	8067 Wight, 76
D ₂	7123 Stockdale, 75	
F ₂	7432 Belenov, 74	
H ₂	6790 Schiavone, 75	9824 Van Brunt, 77
N ₂	6645 Wankenne, 75 7094 Van Brunt, 75 8067 Wight, 76	6803 Crowe, 75 7124 Deleanu, 75
O ₂	6543 Locht, 74	
CO ₂	6885 Stockdale, 75	10163 Bussieres, 77
CS ₂	7691 Hubin-Franskin, 76	
HCN	7377 Korol, 75	
H ₂ S	8411 Balkis, 76	
O ₃	10643 Siegel, 77	
CH ₃ Cl	7635 Luczynski, 75	
CH ₄	7127 Milhaud, 75	8006 Backx, 75
SF ₆	8958 Pullen, 76	
C ₂ H ₆	9656 Suzuki, 77	10444 Selim, 76

CO	9014 Hall, 77	10442 Hall, 76
Cl ₂	10734 Kurepa, 77	
H ₂	9467 Troanc, 77	10442 Hall, 76
H ₂ ⁺	6805 Peart, 75	
NO	10442 Hall, 76	
O ₂	10442 Hall, 76	
CS ₂	6558 Ziesel, 75	
OCS	6558 Ziesel, 75	
BF ₃	7047 Harland, 74	7977 Kurepa, 76
NF ₃	7047 Harland, 74 10229 Shaw, 77	9963 Sides, 77
CF ₄	7047 Harland, 74	
C ₂ F ₆	7047 Harland, 74	
C ₃ F ₈	7047 Harland, 74	

ELECTRON CROSS SECTION INDEX

DISSOCIATIVE ATTACHMENT EXPERIMENTAL

DISSOCIATIVE ATTACHMENT THEORETICAL

Relative

Normalized

CO	6593 Cadez, 75	7528 Tronc, 75
Cl ₂	9806 Kurepa, 77	
DBr	6945 Ziesel, 75	
DCI	6945 Ziesel, 75	9509 Abouaf, 77
F ₂	7432 Belenov, 74	
HBr	6945 Ziesel, 75	10019 Burdett, 77
HCl	6945 Ziesel, 75 10019 Burdett, 77	9509 Abouaf, 77 10732 Abouaf, 77

Relative

O₂ 8412 Mirza, 76

VIBRATIONAL EXCITATION EXPERIMENTAL

H ₂	10735 Schermann, 77
HI	10019 Burdett, 77
NO	10735 Schermann, 77
O ₂	10735 Schermann, 77
CO ₂	7882 Abouaf, 76
H ₂ S	10737 Azria, 77
N ₂ O	9839 Tronc, 77
NO ₂	7529 Abouaf, 75
OCS	8354 Hubin-Franski, 76
SO ₂	8450 Abouaf, 76
CeI ₄	10175 Chantry, 76
CH ₃ Cl	7635 Luczynski, 75
GeBr ₄	10445 Pabst, 77
GeCl ₄	10445 Pabst, 77
SiBr ₄	10445 Pabst, 77
SiCl ₄	10445 Pabst, 77
SnCl ₄	9657 Pabst, 77
UF ₆	9296 Compton, 77

Normalized

DBr ⁺	8961 Mohlmann, 76	
HBr	9672 Rohr, 77	10595 Rohr, 77
HBr ⁺	8961 Mohlmann, 76	
HCl	7148 Center, 75 10731 Dube, 77	8728 Rohr, 76
HF	8728 Rohr, 76	
H ₂	6872 Weingartshofer, 76	10379 Srivastava, 77
N ₂	8618 Truhlar, 76 9368 Mathur, 77	9011 Truhlar, 77
N ₂ ⁺	6689 Lewis, 75	
NO	7450 Reinhardt, 75	
H ₂ O	8727 Seng, 76	10033 Rohr, 77
N ₂ O	7029 Azria, 75	
N ₂ O ⁺	9017 Gerzanich, 76	
SF ₆	9294 Rohr, 77	10726 Rohr, 77

Relative

CO 6744 Swanson, 75

ELECTRON CROSS SECTION INDEX

VIBRATIONAL EXCITATION EXPERIMENTAL			VIBRATIONAL EXCITATION THEORETICAL		
Relative			Normalized		
D ₂	9461 Chang, 77	10592 Chang, 77	N ₂	8618 Truhlar, 76 8770 Mikhailov, 76 9720 Potter, 77	8725 Chandra, 76 9011 Truhlar, 77
HCl	6798 Rohr, 75	6945 Ziesel, 75			
H ₂	9829 Gresteau, 77	10592 Chang, 77	NO	7976 Koike, 75	
N ₂	8283 Estler, 76 10596 Gresteau, 77	10450 Ricard, 77	Na ₂	7453 Drukarev, 75 10032 Drukarev, 77	8978 Drukarev, 76
NO	6751 Tronc, 75 10598 Gresteau, 77	9829 Gresteau, 77	OH	7503 Ashihara, 75	
O ₂	9829 Gresteau, 77	10598 Gresteau, 77	O ₂	7976 Koike, 75	
CO ₂	10028 Cadez, 77 10597 Cadez, 77	10451 Cadez, 76	O ₂ ⁻	8331 Parlant, 76	
N ₂ O	8715 Kuyatt, 76		CO ₂	9020 Szymkowski, 77	
O ₃	10724 Celotta, 77		H ₂ O	7503 Ashihara, 75	
C ₂ H ₂	9673 Wilden, 77		N ₂ O	6701 Dube, 75	7448 Herzenberg, 75
H ₂ CO	8715 Kuyatt, 76		Relative		
NH ₃	10119 Johnson, 77		CO	9820 Chang, 77	10037 Pivovar, 77
SF ₆	7461 Chutjian, 75	8714 Avrillier, 76	HF	9675 Chang, 77	
C ₆ H ₆	6799 Azria, 75		N ₂	9956 Domcke, 77	
			NO ⁻	9242 Teillet-Billy, 77	
			CO ₂	9325 Domcke, 77	9956 Domcke, 77
VIBRATIONAL EXCITATION THEORETICAL			ROTATIONAL EXCITATION EXPERIMENTAL		
Normalized			Normalized		
CO	7503 Ashihara, 75	9021 Zubek, 77	CsF	7449 Stern, 75	
F ₂	9331 Rescigno, 77		H ₂	7119 Srivastava, 75	7454 Srivastava, 75
HCl	9130 Dube, 77				
H ₂	7417 Weatherford, 74 7503 Ashihara, 75 8978 Drukarev, 76	7453 Drukarev, 75 8617 Weatherford, 73 10032 Drukarev, 77	Relative		
K ₂	8978 Drukarev, 76	10032 Drukarev, 77			
Li ₂	8978 Drukarev, 76	10032 Drukarev, 77	D ₂	9461 Chang, 77	10592 Chang, 77
N ₂	7601 Chandra, 76	8275 Chandra, 76	H ₂	9332 Watson Jr., 77	10592 Chang, 77

ELECTRON CROSS SECTION INDEX

ROTATIONAL EXCITATION EXPERIMENTAL

ROTATIONAL EXCITATION THEORETICAL

Relative

Normalized

H₂O 8154 Mohlmann, 76

OH₃⁺ 9954 Dickinson, 77

ROTATIONAL EXCITATION THEORETICAL

ROTATIONAL EXCITATION THEORETICAL

Normalized

Relative

CH 7503 Ashihara, 75

C⁺ 9721 Elitzur, 77

CH⁺ 9954 Dickinson, 77

H₂ 10628 Baille, 77

CN 7270 Dickinson, 75

7978 Jamieson, 76

OH 9721 Elitzur, 77

CO 7270 Dickinson, 75
9670 Chandra, 77

7503 Ashihara, 75
9820 Chang, 77

FREE-FREE EXPERIMENTAL

CsCl 8365 Onda, 76

CsF 7270 Dickinson, 75

8769 Itikawa, 76

Normalized

F₂ 9331 Rescigno, 77

Ar 9668 Weingartshofer, 77

HCl 7270 Dickinson, 75

HD⁺ 6957 Ray, 75

9954 Dickinson, 77

Relative

HF 9297 Gianturco, 77

Ar 8730 Andrick, 76 10356 Ranson, 77
10491 Batenin, 69 10602 Andrick, 77

H₂ 7417 Weatherford, 74
7597 Truhlar, 76
8620 Truhlar, 76
10032 Drukarev, 77
10162 Pande, 77

7503 Ashihara, 75
8589 Bhattacharyya, 76
9840 Klonover, 77
10086 Baille, 77

Ne 8729 Langendam, 76

LiF 9347 Collins, 77

FREE-FREE THEORETICAL

NH 7503 Ashihara, 75

Normalized

N₂ 6747 Chandra, 75
8275 Chandra, 76
9652 Buckley, 77

8195 Brandt, 76
9466 Buckley, 77

Al 851 Peach, 67 10483 Peach, 70

OH 8731 Chu, 76

Al⁺ 10483 Peach, 70

CO₂ 9835 Morrison, 77

Ar 1908 Ashkin, 66 5581 Geltman, 73
5876 John, 73 6013 Stallcop, 74
6518 John, 75 6901 John, 75
8306 Pindzola, 76 8559 Kruger, 76

H₂O 7503 Ashihara, 75

H₂O⁺ 6989 Chu, 75

C 851 Peach, 67 1890 Myerscough, 66
5581 Geltman, 73 7913 John, 76

NH₃ 7503 Ashihara, 75

ELECTRON CROSS SECTION INDEX

FREE-FREE THEORETICAL			FREE-FREE THEORETICAL		
Normalized			Normalized		
C	8507 John, 76 10483 Peach, 70	10017 John, 77	Mg ⁺	851 Peach, 67	10483 Peach, 70
C ⁺	10483 Peach, 70		N	851 Peach, 67 5581 Geltman, 73 6901 John, 75 8505 Kivel, 67 8507 John, 76 9018 John, 77 10090 John, 77 10492 Breene Jr., 64	1927 Dalgarno, 66 6518 John, 75 8503 Kivel, 67 8506 Kasyanov, 65 8662 Dyachkov, 75 9474 Kivel, 77 10483 Peach, 70
C ⁺	10483 Peach, 70		N ⁺	10483 Peach, 70	
Ca ⁺	851 Peach, 67	10483 Peach, 70	N ⁺	10483 Peach, 70	
Cl	806 Kandel, 66 2220 Kandel, 66 6517 John, 75	851 Peach, 67 5874 John, 74 10483 Peach, 70	Na	851 Peach, 67 6518 John, 75 10483 Peach, 70	5567 Hyman, 73 6901 John, 75
Cs	5567 Hyman, 73 6901 John, 75	6518 John, 75	Ne	1927 Dalgarno, 66 5581 Geltman, 73 6013 Stallcop, 74 6901 John, 75	5461 John, 73 5876 John, 73 6518 John, 75
H	851 Peach, 67 1005 Geltman, 65 1366 Ohmura, 61 1792 Doughty, 66 1927 Dalgarno, 66 6202 Stallcop, 74 8250 Jacobs, 75 8638 Wheeler, 42 10486 Ohmura, 64	1000 John, 64 1362 Chandrasekhar, 46 1367 Ohmura, 60 1795 John, 66 5581 Geltman, 73 6568 Bell, 75 8508 Buimistrov, 76 10485 Stilley, 70 10495 Khare, 65	O	851 Peach, 67 5581 Geltman, 73 6606 John, 75 8503 Kivel, 67 8505 Kivel, 67 10483 Peach, 70	1927 Dalgarno, 66 6518 John, 75 6901 John, 75 8504 Breene Jr., 60 9018 John, 77
H ⁺	10487 Berger, 56		O ⁺	10483 Peach, 70	
He	851 Peach, 67 1927 Dalgarno, 66 2847 Somerville, 65 6013 Stallcop, 74 6786 Bell, 75 10483 Peach, 70	1750 McDowell, 66 2503 John, 68 5581 Geltman, 73 6518 John, 75 6901 John, 75	Rb	5567 Hyman, 73	
He ⁺	851 Peach, 67		Si	851 Peach, 67	10483 Peach, 70
Hg	6518 John, 75 8506 Kasyanov, 65	6901 John, 75	Si ⁺	10483 Peach, 70	
K	851 Peach, 67 10483 Peach, 70	5567 Hyman, 73	Xe	5581 Geltman, 73 6518 John, 75	6013 Stallcop, 74 6901 John, 75
Kr	5581 Geltman, 73 6518 John, 75	6013 Stallcop, 74 6901 John, 75	CO	6518 John, 75	6901 John, 75
Li	851 Peach, 67 5567 Hyman, 73 6401 John, 74 6901 John, 75 10493 Yaakobi, 70	5364 John, 72 5757 John, 73 6518 John, 75 10483 Peach, 70	F ₂	10089 John, 77	
Mg	851 Peach, 67	10483 Peach, 70	H ₂	717 Somerville, 64 6518 John, 75 6901 John, 75	1927 Dalgarno, 66 6620 Bell, 75 8558 Borie, 70
			N ₂	1927 Dalgarno, 66 6901 John, 75 8558 Borie, 70	6518 John, 75 8503 Kivel, 67

ELECTRON CROSS SECTION INDEX

FREE-FREE THEORETICAL

RADIATIVE RECOMBINATION THEORETICAL

Normalized

O ₂	1927 Dalgarno, 66 6901 John, 75 8558 Borie, 70	6518 John, 75 8503 Kivel, 67
CO ₂	6518 John, 75	6901 John, 75
H ₂ O	6518 John, 75	6901 John, 75
Air	8506 Kasyanov, 65	8560 Mjolsness, 67

Relative

Ar	9722 Amusia, 76
C	10484 Wilson, 67
C ⁺¹	10484 Wilson, 67
He ⁺¹	10494 Peach, 65
N	10484 Wilson, 67
N ⁺¹	10484 Wilson, 67
O	10484 Wilson, 67
O ⁺¹	10484 Wilson, 67
Xe	9722 Amusia, 76

RADIATIVE RECOMBINATION EXPERIMENTAL

Normalized

Ar	7440 Trnovec, 75
----	------------------

Relative

Ar ⁺¹	7048 Raoul, 75
He ⁺¹	6560 Heideman, 75
H ₃ ⁺¹	7446 Caudano, 75

Normalized

Al ⁺⁴	9807 Narain, 77	
Al ⁺⁵	9807 Narain, 77	
B ⁺³	8736 Chandra, 76	
Be ⁺²	8736 Chandra, 76	
C ⁺⁴	8736 Chandra, 76	9606 Jain, 76
C ⁺⁵	9606 Jain, 76	
F ⁺⁴	9807 Narain, 77	
F ⁺⁵	9807 Narain, 77	
F ⁺⁷	8736 Chandra, 76	
Fe ⁺¹⁵	8734 Barfield, 75	
Fe ⁺¹⁶	8734 Barfield, 75	9606 Jain, 76
Fe ⁺¹⁷	8734 Barfield, 75	
Fe ⁺¹⁸	8734 Barfield, 75	
Fe ⁺¹⁹	8734 Barfield, 75	
Fe ⁺²⁰	8734 Barfield, 75	
Fe ⁺²¹	8734 Barfield, 75	
Fe ⁺²²	8734 Barfield, 75	
Fe ⁺²³	8734 Barfield, 75	
Fe ⁺²⁴	8734 Barfield, 75	
Fe ⁺²⁵	8734 Barfield, 75	
H ⁺¹	8004 Bates, 74	
He	8736 Chandra, 76	
Li ⁺¹	8736 Chandra, 76	
Mg ⁺⁴	9807 Narain, 77	
Mg ⁺⁵	9807 Narain, 77	
Mg ⁺¹⁰	8736 Chandra, 76	
N ⁺⁵	8736 Chandra, 76	

ELECTRON CROSS SECTION INDEX

RADIATIVE RECOMBINATION THEORETICAL

Normalized

Na ⁺¹	9807 Narain, 77
Na ⁺⁵	9807 Narain, 77
Ne ⁺⁴	9807 Narain, 77
Ne ⁺⁵	9807 Narain, 77
Ne ⁺⁸	8736 Chandra, 76
O ⁺⁴	9807 Narain, 77
O ⁺⁶	8736 Chandra, 76
Si ⁺⁵	9807 Narain, 77

Relative

C ⁺⁵	7439 Weisheit, 75
Cs	10117 Kunc, 77
K	10117 Kunc, 77
Li	10117 Kunc, 77
Na	10117 Kunc, 77

RADIATIVE ATTACHMENT EXPERIMENTAL

Relative

O ₂	9658 Shimamori, 77
SF ₆	7582 Foster, 75

RADIATIVE ATTACHMENT THEORETICAL

Normalized

Br	9659 Mital, 77
C	1890 Myerscough, 66 9659 Mital, 77

RADIATIVE ATTACHMENT THEORETICAL

Normalized

Cl	9659 Mital, 77
F	9659 Mital, 77
H	8638 Wheeler, 42
I	9659 Mital, 77
K	8110 Chandra, 76
Li	8110 Chandra, 76
N	8662 Dyachkov, 75
Na	8110 Chandra, 76
O	9659 Mital, 77
S	9659 Mital, 77
Si	9659 Mital, 77

Relative

O ₃	9723 Cederbaum, 77
SO ₂	9723 Cederbaum, 77

DISSOCIATIVE RECOMBINATION EXPERIMENTAL

Normalized

ArH ⁺¹	9823 Gaucherel, 77	
D ₂ ⁺¹	6546 Phaneuf, 75	6809 Vogler, 75
	7523 Phaneuf, 75	
H ₂ ⁺¹	8491 McGowan, 76	10024 Auerbach, 77
	10755 McGowan, 77	
Kr ₂ ⁺¹	9847 Shiu, 77	
N ₂ ⁺¹	9823 Gaucherel, 77	
O ₂ ⁺¹	9823 Gaucherel, 77	
Xe ₂ ⁺¹	9057 Shiu, 77	

ELECTRON CROSS SECTION INDEX

DISSOCIATIVE RECOMBINATION EXPERIMENTAL

Normalized

H_3^{+1} 10024 Auerbach, 77

NH_4^{+1} 10644 Du Bois, 77

Relative

NO^{+1} 9126 Kley, 77

DISSOCIATIVE RECOMBINATION THEORETICAL

Normalized

D_2^{+1} 8941 Bottcher, 76

H_2^{+1} 8941 Bottcher, 76

NO^{+1} 9671 Lee, 77

O_2^{+1} 9446 Kulagin, 76

Relative

N_2 7096 Koura, 75

II. Positron Cross Section Index

TOTAL SCATTERING EXPERIMENTAL

Normalized

Ar	7720 Kauppila, 76 8922 Coleman, 76	8771 Tsai, 76 10760 Stein, 77
He	6587 Dutton, 75 7273 Coleman, 75 7575 Coleman, 75 9809 Brenton, 77 10760 Stein, 77 10762 Twomey, 77	6801 Jaduszliwer, 75 7468 Dutton, 75 8922 Coleman, 76 10733 Kauppila, 77 10761 Brenton, 77
Kr	8922 Coleman, 76	10760 Stein, 77
Ne	8771 Tsai, 76 10760 Stein, 77	8922 Coleman, 76 10761 Brenton, 77
Xe	10760 Stein, 77	
H ₂	10767 Kauppila, 77	
N ₂	10767 Kauppila, 77	
O ₂	7575 Coleman, 75	
CO ₂	7575 Coleman, 75	10767 Kauppila, 77

TOTAL SCATTERING THEORETICAL

Normalized

H	6837 Vanderpoorten, 75 10763 Roy, 77	8277 Foster, 76
He	6837 Vanderpoorten, 75 7467 Cherepkov, 75	7406 Mandal, 75 9299 Campeanu, 77
H ₂	7859 Bhattacharyya, 75	
N ₂	7275 Gillespie, 75	

ELASTIC SCATTERING EXPERIMENTAL

Normalized

He	9965 Burciaga, 77
----	-------------------

ELASTIC SCATTERING THEORETICAL

Normalized

Ar	6958 Joachain, 75 9964 Ali, 77	9168 Joachain, 77
Cs	9043 Bordonaro, 76	
H	6684 Register, 75 7274 Mandal, 75 8070 Foster, 76 8614 Saha, 73 8945 Chan, 76 10764 Massaro, 77	6837 Vanderpoorten, 75 8030 Basu, 76 8193 Das, 76 8622 Page, 76 9167 Byron Jr., 77
He	6740 Ho, 75 6837 Vanderpoorten, 75 8241 Pai, 76 8614 Saha, 73 8661 Mandal, 76 8965 Ho, 76 9167 Byron Jr., 77 9263 McEachran, 77	6827 Campeanu, 75 7406 Mandal, 75 8402 De Heer, 76 8622 Page, 76 8944 Amusia, 76 9041 Byron Jr., 77 9244 Dewangan, 77 9964 Ali, 77
K	9043 Bordonaro, 76	
Na	6800 Bui, 75	9043 Bordonaro, 76
Ne	6618 Bransden, 75 9244 Dewangan, 77	9041 Byron Jr., 77 10766 Ryman, 77
Rb	9043 Bordonaro, 76	
H ₂	7859 Bhattacharyya, 75	
N ₂	7275 Gillespie, 75	

IONIZATION THEORETICAL

Normalized

H	8255 Banks, 76	8318 Drachman, 76
---	----------------	-------------------

ELECTRONIC EXCITATION THEORETICAL

Normalized

H	7274 Mandal, 75 10765 Darewych, 77	10764 Massaro, 77
---	---------------------------------------	-------------------

POSITRON CROSS SECTION INDEX

ELECTRONIC EXCITATION THEORETICAL

Normalized

He 6793 Buckley, 75

VIBRATIONAL EXCITATION THEORETICAL

Normalized

H₂ 7239 Baille, 74

HeH⁺ 7097 Ray, 75

ROTATIONAL EXCITATION THEORETICAL

Normalized

HD⁺ 6957 Ray, 75

H₂ 7239 Baille, 74

HeH⁺ 7097 Ray, 75

N₂ 7275 Gillespie, 75

III. Photon Cross Section Index

ABSORPTION EXPERIMENTAL

ABSORPTION EXPERIMENTAL

Normalized

Normalized

Cd	7130 Miyazaki, 75		NO ₂	8593 Bass, 76	9743 Harker, 77
Kr	7407 Lang, 75		O ₃	7023 Schnell, 75	
Na	9747 Codling, 77		SnBr ₂	10181 Maya, 77	
Tl	9855 Kozlov, 76		SnCl ₂	10181 Maya, 77	
Xe	6667 Ederer, 75 7890 West, 76	7407 Lang, 75	SnI ₂	10181 Maya, 77	
CO	6580 Watson, 75 8321 Starr, 76	7426 Lee, 75 9489 De Reilhac, 77	H ₂ O ₂	10359 Molina, 77	
CdI	8367 Miyazaki, 76		NF ₃	8081 Makeev, 75	
ClO	9481 Mandelman, 77 9852 Wine, 77	9492 Rigaud, 77	NH ₃	7023 Schnell, 75	9489 De Reilhac, 77
D ₂	8531 Lee, 76		O ₁	9134 Shardanand 77	
F ₂	9686 Batovskii, 76		CCl ₂ F ₂	7023 Schnell, 75	
HCl	9400 Bair, 77		CD ₃ Br	7056 Huebner, 75	
H ₂	8531 Lee, 76		CF ₃ Cl	9510 Lee, 77	
N ₂	8321 Starr, 76 9489 De Reilhac, 77	9462 Gurtler, 77	CF ₄	9510 Lee, 77	
NO	8481 Hanson, 76	9489 De Reilhac, 77	CH ₃ Br	8296 Robbins, 76	
O ₂	7024 Dose, 75 8740 Bodeur, 76 9489 De Reilhac, 77	8321 Starr, 76 9134 Shardanand 77	CH ₃ Cl	8296 Robbins, 76	
O ₂ [*]	7759 Ogawa, 75		CH ₄	6581 Deaton, 75 8745 Heffington, 76 9489 De Reilhac, 77	8321 Starr, 76 9351 Mount, 77 9510 Lee, 77
CO ₂	6580 Watson, 75 8321 Starr, 76 9265 Seguin, 77 9968 Moskalkenko, 75	7584 Miller, 75 8742 Hays, 76 9489 De Reilhac, 77	C ₂ H ₄	7023 Schnell, 75	
D ₂ O	9848 Phillips, 77	10183 Gurtler, 77	N ₂ O ₄	8593 Bass, 76	
H ₂ O	7023 Schnell, 75 9848 Phillips, 77	9489 De Reilhac, 77 10183 Gurtler, 77	SF ₆	7607 Nowak, 75 9853 Stafast, 77	9510 Lee, 77
HgBr ₂	10181 Maya, 77		UF ₆	8641 Srivastava, 76	9495 De Witte, 77
HgI ₂	10181 Maya, 77		C ₂ F ₆	9510 Lee, 77	
N ₂ O	6581 Deaton, 75 8397 Johnston, 75	8321 Starr, 76 9489 De Reilhac, 77	Relative		
			Ba	6582 Ederer, 75	
			Cs	6538 Petersen, 75	8199 Van Raan, 76
			Ne ⁻	8729 Langendam, 76	

PHOTON CROSS SECTION INDEX

ABSORPTION EXPERIMENTAL

SCATTERING EXPERIMENTAL

Relative

Normalized

Xe 7917 Latimer, 75
H₂ 8413 Dehmer, 76
O₂ 8873 Cartwright, 76

Al 7889 Prema Chand, 76
Ar 6617 Chopra, 74
Cd 7889 Prema Chand, 76
Cu 7889 Prema Chand, 76

ABSORPTION THEORETICAL

Normalized

Ar 7860 Fano, 75
H 8791 Langhoff, 76
H⁻ 7470 Broad, 75 7604 Broad, 76
8791 Langhoff, 76

He 8791 Langhoff, 76

Li 10040 Langhoff, 77

Mg 9494 Amusia, 77

Na 9494 Amusia, 77

CO 9688 Belevtsev, 77

ClO 9482 Langhoff, 77

N₂ 9688 Belevtsev, 77

NO 6583 Bourg-Heckly, 75

O₂ 8398 Kockarts, 76 9688 Belevtsev, 77

SO₂ 9301 Osumi, 77

Relative

H 6999 Rescigno, 75

He 7310 Chatterji, 75

SF₆ 9493 Kivel, 77

H 6617 Chopra, 74
Kr 6617 Chopra, 74
N 6617 Chopra, 74
Ti 7889 Prema Chand, 76
Xe 6617 Chopra, 74
Zr 7889 Prema Chand, 76

Relative

I₂ 6709 Rousseau, 75 6710 Robrish, 75

SCATTERING THEORETICAL

Normalized

Ag 8112 Hubbell, 75
Al 7587 Brown, 75 8112 Hubbell, 75
Ar 7587 Brown, 75 8112 Hubbell, 75
As 8112 Hubbell, 75
Au 8112 Hubbell, 75
B 7587 Brown, 75 8112 Hubbell, 75
Ba 8112 Hubbell, 75
Be 7587 Brown, 75 8112 Hubbell, 75
Bi 8112 Hubbell, 75
Br 8112 Hubbell, 75

PHOTON CROSS SECTION INDEX

SCATTERING THEORETICAL

SCATTERING THEORETICAL

Normalized

Normalized

C	7587 Brown, 75	8112 Hubbell, 75
Ca	7587 Brown, 75	8112 Hubbell, 75
Cd	8112 Hubbell, 75	
Cl	7587 Brown, 75	8112 Hubbell, 75
Co	8112 Hubbell, 75	
Cr	7587 Brown, 75	8112 Hubbell, 75
Cs	8112 Hubbell, 75	
Cu	8112 Hubbell, 75	
Eu	8112 Hubbell, 75	
F	7587 Brown, 75	8112 Hubbell, 75
Fe	7587 Brown, 75	8112 Hubbell, 75
Ga	8112 Hubbell, 75	
Ge	8112 Hubbell, 75	
H	8112 Hubbell, 75	
He	6823 Lin, 75 7587 Brown, 75	7348 Barfield, 76 8112 Hubbell, 75
Hg	8112 Hubbell, 75	
I	8112 Hubbell, 75	
In	8112 Hubbell, 75	
K	7587 Brown, 75	8112 Hubbell, 75
Kr	8112 Hubbell, 75	
Li	7587 Brown, 75	8112 Hubbell, 75
Mg	7587 Brown, 75	8112 Hubbell, 75
Mn	7587 Brown, 75	8112 Hubbell, 75
Mo	8112 Hubbell, 75	
N	7587 Brown, 75	8112 Hubbell, 75
Na	7587 Brown, 75	8112 Hubbell, 75
Nb	8112 Hubbell, 75	

Ne	7348 Barfield, 76 8112 Hubbell, 75	7587 Brown, 75
Ni	8112 Hubbell, 75	
O	7587 Brown, 75	8112 Hubbell, 75
P	7587 Brown, 75	8112 Hubbell, 75
Pb	8112 Hubbell, 75	
Pd	8112 Hubbell, 75	
Pr	8112 Hubbell, 75	
Pt	8112 Hubbell, 75	
Rb	8112 Hubbell, 75	
Rh	8112 Hubbell, 75	
Ru	8112 Hubbell, 75	
S	7587 Brown, 75	8112 Hubbell, 75
Sb	8112 Hubbell, 75	
Sc	7587 Brown, 75	8112 Hubbell, 75
Se	8112 Hubbell, 75	
Si	7587 Brown, 75	8112 Hubbell, 75
Sn	8112 Hubbell, 75	
Sr	8112 Hubbell, 75	
Ta	8112 Hubbell, 75	
Tc	8112 Hubbell, 75	
Te	8112 Hubbell, 75	
Th	8112 Hubbell, 75	
Ti	7587 Brown, 75	8112 Hubbell, 75
Tl	8112 Hubbell, 75	
Tm	8112 Hubbell, 75	
U	8112 Hubbell, 75	
V	7587 Brown, 75	8112 Hubbell, 75

PHOTON CROSS SECTION INDEX

SCATTERING THEORETICAL

IONIZATION EXPERIMENTAL

Normalized

Xe 8112 Hubbell, 75
Y 8112 Hubbell, 75
Yb 8112 Hubbell, 75
Zn 8112 Hubbell, 75
Zr 8112 Hubbell, 75

Relative

I₂ 6709 Rousseau, 75

IONIZATION EXPERIMENTAL

Normalized

Ar 8184 West, 76 8744 Houlgate, 76
Cr 6668 Huber, 75
Cs 7137 Nygaard, 75 9047 Heinzmann, 77
9132 Cook, 77
Eu 9685 Kozlov, 76
H 8033 Palenius, 76
He 8184 West, 76 10092 Drouet, 77
He⁺ 7576 Stebbings, 75 10094 Belik, 77
Ir 6590 Cukier, 75
K 8038 Driver, 76
Kr 8184 West, 76 10180 Miller, 77
Mg⁺ 8035 Bradley, 76
Na⁺ 7585 Ambartsumian, 75
Ne 8059 Codling, 76 8184 West, 76
Rb 8258 Klyucharev, 75
Rb⁺ 7861 Ambartsumian, 76

Normalized

U 7603 Janes, 76
Xe 8872 Samson, 76 9334 Shannon, 77
10018 Gustafsson, 77
CO 7352 Samson, 76 9491 Plummer, 77
9969 Lee, 77
ClO 9481 Mandelmann, 77
N₂ 7556 Mintz, 75 9489 De Reilhac, 77
9491 Plummer, 77 9684 Samson, 77
9969 Lee, 77 10092 Drouet, 77
10453 Woodruff, 77
NO 7904 Mori, 75
CO₂⁺ 7081 Ellefson, 75
N₂O 9969 Lee, 77
H₂CO 7980 Guyon, 76

Relative

Al 7409 Roig, 75
Ar 7136 Samson, 75 8071 Schmidt, 76
8695 Peatman, 75
Ar⁺ 7576 Stebbings, 75
Cd 9724 Caldwell, 77
Fe 9027 Hansen, 77
Ga 9483 Connerade, 77
He 8071 Schmidt, 76 8083 Seguin, 76
Kr 7002 Van Der Wiel, 75 7136 Samson, 75
Kr⁺ 7576 Stebbings, 75
Ne 7136 Samson, 75 8071 Schmidt, 76
O 9484 Dehmer, 77 9687 Samson, 77
O⁺ 9484 Dehmer, 77
Sb 8183 Lindau, 76

PHOTON CROSS SECTION INDEX

IONIZATION EXPERIMENTAL			IONIZATION EXPERIMENTAL		
Relative			Relative		
Sm	6724 Parr, 75		CH ₃ Br	8495 Ivanov, 75	
Xe	6666 Rundel, 75 7136 Samson, 75	7002 Van Der Wiel, 75 7558 Samson, 75	CH ₃ Cl	8495 Ivanov, 75	
Xe [*]	7576 Stebbings, 75		CH ₃ I	8495 Ivanov, 75	
Ar ₂	9025 Ng, 77		HNO ₃	8693 Frost, 75	
CO	7134 Lee, 75		C ₂ H ₄	7052 Stockbauer, 75	
DI	10182 Eland, 77		C ₆ H ₆	10381 Rosenstock, 77	
H ₂	7131 Gardner, 75 7588 Peatman, 75	7557 Chupka, 75 8413 Dehmer, 76	IONIZATION THEORETICAL		
HI	10182 Eland, 77		Normalized		
KrAr	9463 Ng, 77		Ag	8793 Scofield, 76	
Kr ₂	9025 Ng, 77		Al	7277 Le Dourneuf, 75 8186 Farnoux, 76 10483 Peach, 70	7561 Le Dourneuf, 75 8793 Scofield, 76
N ₂	8083 Seguin, 76		Al ⁺¹	8186 Farnoux, 76	10483 Peach, 70
N ₂ [*]	8774 Koyano, 76		Al ⁺²	8186 Farnoux, 76	
NO	6670 Kleimenov, 72 10649 Schmoranzner, 77	8414 Ng, 76	Al ⁺³	9302 Msezane, 77	9850 Chang, 77
O ₂	6708 Dehmer, 75		Al ⁺¹⁰	6737 Martin, 75	
O ₂ ⁺¹	6749 Ajello, 74		Ar	7135 Pindzola, 75 7560 Burke, 75 8358 Hilton, 76 8452 Kabachnik, 76 8947 Carter, 76 9302 Msezane, 77 9850 Chang, 77 10125 Carter, 77	7276 Burke, 75 8186 Farnoux, 76 8399 Amusia, 75 8793 Scofield, 76 9024 Swanson, 77 9488 Chang, 77 9967 Swanson, 77 10128 Hilton, 77
XeAr	9463 Ng, 77		Ar [*]	9485 Hyman, 77	9849 McCann, 77
XeKr	9463 Ng, 77		Ar ⁺¹	8186 Farnoux, 76	
Xe ₂	8741 Ng, 76		Ar ⁺²	8186 Farnoux, 76	
CO ₂	6539 Parr, 74 8083 Seguin, 76	7134 Lee, 75 9349 Frey, 77	As	8793 Scofield, 76	
O ₃	9300 Weiss, 77		Au	8793 Scofield, 76	
O ₃ ⁺¹	6749 Ajello, 74		B	8793 Scofield, 76	
NH ₃	10772 Brion, 77				
(NO) ₂	10127 Ng, 77				
CCl ₃ F	8198 Ajello, 76	8694 Chau, 75			
CCl ₂ F ₂	8198 Ajello, 76				

PHOTON CROSS SECTION INDEX

IONIZATION THEORETICAL			IONIZATION THEORETICAL		
Normalized			Normalized		
B ⁺²	6737 Martin, 75	7309 Tiwari, 75	F	8793 Scofield, 76	
Ba	6591 Wendin, 75 7563 Farnoux, 75 8793 Scofield, 76	7559 Amusia, 75 8399 Amusia, 75 8946 Amusia, 76	F ⁺⁶	6737 Martin, 75	
Be	8036 Amusia, 76 8793 Scofield, 76	8399 Amusia, 75 9681 Johnson, 77	Fe	8793 Scofield, 76	
Be ⁺¹	6737 Martin, 75 9680 Tiwari, 77	7309 Tiwari, 75	Fe ⁺¹⁷	8734 Barfield, 75	
Bi	8793 Scofield, 76		Ga	8793 Scofield, 76	
Br	7555 Manson, 75	8793 Scofield, 76	Ge	8793 Scofield, 76	
C	7408 Carter, 75 8453 Carter, 76 8793 Scofield, 76	8037 Carter, 76 8773 Taylor, 76 10483 Peach, 70	H	6819 Weisheit, 74 10091 Johnson, 77	8793 Scofield, 76
C ⁺¹	10483 Peach, 70		H ⁻	10091 Johnson, 77	
C ⁺²	10483 Peach, 70		H ⁺	7605 Rescigno, 76	
C ⁺³	6737 Martin, 75 9680 Tiwari, 77	7309 Tiwari, 75	He	6711 Yurev, 75 8036 Amusia, 76 8399 Amusia, 75 8949 Amusia, 76 10128 Hilton, 77	7605 Rescigno, 76 8358 Hilton, 76 8793 Scofield, 76 9681 Johnson, 77 10483 Peach, 70
Ca	8186 Farnoux, 76 8793 Scofield, 76	8399 Amusia, 75 9264 Hofsaess, 77	He ⁺	7263 Yeager, 75	9849 McCann, 77
Ca ⁺¹	8186 Farnoux, 76	10483 Peach, 70	Hg	6511 Shyu, 75	8793 Scofield, 76
Ca ⁺²	8186 Farnoux, 76	9850 Chang, 77	I	8793 Scofield, 76	
Cd	8793 Scofield, 76		In	8793 Scofield, 76	9064 Amusia, 77
Cl	7562 Starace, 75 8793 Scofield, 76 10483 Peach, 70	8032 Starace, 76 9023 Cherepkov, 77	Ir	6590 Cukier, 75	
Co	8793 Scofield, 76		K	6589 Chang, 75 8320 Aymar, 76 8793 Scofield, 76 10483 Peach, 70	8186 Farnoux, 76 8399 Amusia, 75 9264 Hofsaess, 77
Cr	8793 Scofield, 76		K ⁺¹	8186 Farnoux, 76	9850 Chang, 77
Cs	6890 Msezane, 75 8399 Amusia, 75 8946 Amusia, 76	7563 Farnoux, 75 8793 Scofield, 76 9264 Hofsaess, 77	K ⁺²	8186 Farnoux, 76	
Cs ⁺¹	9264 Hofsaess, 77		Kr	8358 Hilton, 76 8793 Scofield, 76 9302 Msezane, 77 10128 Hilton, 77	8399 Amusia, 75 9024 Swanson, 77 9967 Swanson, 77
Cu	8793 Scofield, 76		Kr ⁺	9485 Hyman, 77	9849 McCann, 77
Eu	8793 Scofield, 76		Li	6512 Chang, 75 7309 Tiwari, 75 8036 Amusia, 76	6737 Martin, 75 7865 Bhatia, 75 8320 Aymar, 76

PHOTON CROSS SECTION INDEX

IONIZATION THEORETICAL

IONIZATION THEORETICAL

Normalized

Normalized

Li	8399 Amusia, 75 9264 Hofsaess, 77 10040 Langhoff, 77 10483 Peach, 70	8793 Scofield, 76 9680 Tiwari, 77 10456 Langhoff, 77
Li ⁺	9264 Hofsaess, 77	
Mg	8186 Farnoux, 76 8793 Scofield, 76 9494 Amusia, 77	8399 Amusia, 75 9264 Hofsaess, 77 10483 Peach, 70
Mg ⁺¹	8186 Farnoux, 76 10483 Peach, 70	9264 Hofsaess, 77
Mg ⁺²	8186 Farnoux, 76	9850 Chang, 77
Mg ^{+u}	6737 Martin, 75	
Mn	8793 Scofield, 76	
Mo	8793 Scofield, 76	
Mo ⁺⁶	9302 Msezane, 77	
N	8772 Le Dourneuf, 76 10483 Peach, 70	8793 Scofield, 76
N ⁺¹	10483 Peach, 70	
N ⁺²	10483 Peach, 70	
N ⁺⁴	6737 Martin, 75	7309 Tiwari, 75
Na	6589 Chang, 75 8186 Farnoux, 76 8399 Amusia, 75 9264 Hofsaess, 77 10483 Peach, 70	6889 Chang, 75 8320 Aymar, 76 8793 Scofield, 76 9494 Amusia, 77
Na ⁺¹	8186 Farnoux, 76	9850 Chang, 77
Na ⁺²	8186 Farnoux, 76	
Na ^{+R}	6737 Martin, 75	
Nb	8793 Scofield, 76	
Ne	7133 Chang, 75 7560 Burke, 75 8297 Debies, 75 8399 Amusia, 75 8793 Scofield, 76 9046 Williams, 77 9488 Chang, 77	7276 Burke, 75 8186 Farnoux, 76 8358 Hilton, 76 8452 Kabachnik, 76 9024 Swanson, 77 9302 Msezane, 77 9850 Chang, 77

Ne	9967 Swanson, 77 10128 Hilton, 77	10125 Carter, 77 10774 Rescigno, 77
Ne ⁺	9849 McCann, 77	10130 Hazi, 77
Ne ⁺¹	8186 Farnoux, 76	
Ne ⁺²	8186 Farnoux, 76	
Ne ⁺⁷	6737 Martin, 75	
Ni	8793 Scofield, 76	
O	8773 Taylor, 76 9220 Missavage, 77	8793 Scofield, 76 10483 Peach, 70
O ⁺¹	9220 Missavage, 77	10483 Peach, 70
O ⁺²	9220 Missavage, 77	
O ⁺³	9220 Missavage, 77	
O ⁺⁴	9220 Missavage, 77	
O ⁺⁵	6737 Martin, 75 9220 Missavage, 77	7309 Tiwari, 75 9680 Tiwari, 77
O ⁺⁶	9220 Missavage, 77	
P	8793 Scofield, 76	
P ⁺⁵	9302 Msezane, 77	
Pb	8793 Scofield, 76	
Pd	8793 Scofield, 76	
Pr	8793 Scofield, 76	
Pt	8793 Scofield, 76	
Rb	8793 Scofield, 76	9264 Hofsaess, 77
Rh	8793 Scofield, 76	
Ru	8793 Scofield, 76	
S	6643 Dill, 75	8793 Scofield, 76
Sb	8793 Scofield, 76	
Sc	8186 Farnoux, 76	8793 Scofield, 76
Sc ⁺¹	8186 Farnoux, 76	

PHOTON CROSS SECTION INDEX

IONIZATION		THEORETICAL		IONIZATION		THEORETICAL	
Normalized				Normalized			
Sc ⁺²	8186 Farnoux, 76			CO	8743 Hirota, 76		
Sc ⁺³	9302 Msezane, 77	9850 Chang, 77		HF	8297 Debies, 75		
Se	7555 Manson, 75	8793 Scofield, 76		H ₂	6540 Ford, 75	8358 Hilton, 76	
Si	8793 Scofield, 76	10483 Peach, 70			8624 Pandey, 74	8743 Hirota, 76	
Si ⁺¹	7862 Daum, 76	10483 Peach, 70			9746 Dutta, 77	9966 Tai, 77	
Si ⁺¹¹	6737 Martin, 75			H ₂ [*]	7001 Ford, 75		
Sn	8793 Scofield, 76			H ₂ ⁺¹	7022 Chapman Jr., 75	9371 Chapman Jr., 77	
Sr	8793 Scofield, 76			N ₂	6588 Dewar, 75	7902 Duzy, 76	
Ta	8793 Scofield, 76				8034 Davenport, 76	8743 Hirota, 76	
Tc	8793 Scofield, 76				10455 Davenport, 77	10456 Langhoff, 77	
Te	8793 Scofield, 76				10770 Rescigno, 77		
Th	8793 Scofield, 76			O ₂	8743 Hirota, 76		
Ti	8793 Scofield, 76			CO ₂	8061 Yurev, 75		
Tl	8793 Scofield, 76	10093 Cherepkov, 77		H ₂ O	6588 Dewar, 75	8297 Debies, 75	
Tm	8793 Scofield, 76				8358 Hilton, 76		
V	8793 Scofield, 76			H ₂ S	6588 Dewar, 75		
V ⁺⁵	9302 Msezane, 77			H ₂ CO	9745 Langhoff, 77	10456 Langhoff, 77	
Xe	8399 Amusia, 75	8793 Scofield, 76		NH ₃	8297 Debies, 75		
	8946 Amusia, 76	8967 Amusia, 76		CH ₄	6588 Dewar, 75	8297 Debies, 75	
	9024 Swanson, 77	9302 Msezane, 77		C ₂ H ₄	6588 Dewar, 75	8082 Kaplan, 75	
	9967 Swanson, 77	10769 Armstrong Jr., 77			8358 Hilton, 76		
Xe [*]	9849 McCann, 77			C ₂ H ₆	8464 Markin, 76		
Y	8793 Scofield, 76						
Y ⁺³	9302 Msezane, 77			Relative			
Yb	8793 Scofield, 76			Ar	10773 Balashov, 77		
Zn	7606 Fliflet, 76	8399 Amusia, 75		Cs [*]	10454 Devdariani, 77		
	8793 Scofield, 76			H ⁻	6939 Doyle, 75		
Zr	8793 Scofield, 76			He	6824 Amusia, 75	6939 Doyle, 75	
CO	6588 Dewar, 75	8034 Davenport, 76		Ne	10773 Balashov, 77		
	8061 Yurev, 75	8358 Hilton, 76		D ₂	6540 Ford, 75		

PHOTON CROSS SECTION INDEX

IONIZATION THEORETICAL

DETACHMENT EXPERIMENTAL

Relative

Normalized

HD 6540 Ford, 75

H₂ 6735 Ford, 75

N₂ 7903 Duzy, 76

Te⁻ 9689 Feldmann, 77

Tl⁻ 9350 Feldmann, 77

MgH⁻ 9512 Rackwitz, 77

O₂⁻ 6886 Cosby, 75 7476 Peterson, 75
8923 Cosby, 76

PH⁻ 9512 Rackwitz, 77

ZnH⁻ 9512 Rackwitz, 77

CH₂⁻ 9511 Feldmann, 77

CO₂⁻ 8483 Beyer, 76

NO₂⁻ 9303 Huber, 77 10645 Huber, 77

O₃⁻ 6886 Cosby, 75 7476 Peterson, 75

CH₃⁻ 9511 Feldmann, 77

CO₃⁻ 8483 Beyer, 76 9133 Hong, 77

DETACHMENT EXPERIMENTAL

Normalized

As⁻ 9689 Feldmann, 77

B⁻ 9350 Feldmann, 77

Bi⁻ 9689 Feldmann, 77

Br⁻ 8319 Mandl, 76

Cl⁻ 8319 Mandl, 76

Cr⁻ 9689 Feldmann, 77

Cs⁻ 6888 Kaiser, 74

Ga⁻ 9350 Feldmann, 77

Ge⁻ 9350 Feldmann, 77

H⁻ 8482 Popp, 76 9683 Bryant, 77

In⁻ 9350 Feldmann, 77

K⁻ 6888 Kaiser, 74 8984 Lineberger, 76

Li⁻ 6888 Kaiser, 74

Na⁻ 6888 Kaiser, 74

Ni⁻ 9689 Feldmann, 77

P⁻ 9689 Feldmann, 77

Pb⁻ 9350 Feldmann, 77

Rb⁻ 6888 Kaiser, 74

Sb⁻ 9689 Feldmann, 77

Sn⁻ 9350 Feldmann, 77

Relative

C⁻ 9376 Feldmann, 77

H⁻ 6669 Feldmann, 75

K 10768 Taylor, 77

Li⁻ 8185 Feldmann, 76

O⁻ 10771 Breyer, 77

P⁻ 8185 Feldmann, 76 9725 Slater, 77

Te⁻ 7472 Slater, 75 9725 Slater, 77

As₂⁻ 9511 Feldmann, 77

AsH⁻ 9512 Rackwitz, 77

BeH⁻ 9512 Rackwitz, 77

CH⁻ 6579 Kasdan, 75

CaH⁻ 9512 Rackwitz, 77

LiCl⁻ 7471 Carlsten, 75

PHOTON CROSS SECTION INDEX

DISSOCIATION EXPERIMENTAL			DISSOCIATION EXPERIMENTAL		
Normalized			Normalized		
CsBr	9026 Mandl, 77		Mixture	8483 Beyer, 76	
CsCl	9026 Mandl, 77				
CsI	9026 Mandl, 77	9851 Grossman, 77			
D_2^{+1}	9490 Thomas, 77				
HD^{+1}	7308 Van Asselt, 75	9490 Thomas, 77	Relative		
H_2^{+1}	9065 Orth, 77		Ar_2^{+1}	10648 Moseley, 77	
Ne_2^{+1}	9348 Vestal, 76		CO	7134 Lee, 75	8983 Kronebusch, 76
O_2^-	9856 Vestal, 77		Cl_2^-	9487 Sullivan, 77	
O_2^{+1}	9856 Vestal, 77		D_2	7474 Guyon, 75	9045 Borrell, 77
CO_2	8625 Phillips, 76		H_2	7131 Gardner, 75 9045 Borrell, 77	8948 Strathdee, 76
CO_2^{+1}	10126 Smith, 77		N_2	8983 Kronebusch, 76	
N_2O^{+1}	9028 Orth, 77	9490 Thomas, 77	NO	8983 Kronebusch, 76	10649 Schmoranzner, 77
O_3^-	6886 Cosby, 75 9856 Vestal, 77	7476 Peterson, 75 10647 Cosby, 77	O_2	8982 Stone, 76 10457 Lee, 77	8983 Kronebusch, 76
O_3^{+1}	9856 Vestal, 77		O_2^{+1}	10650 Pernot, 77	10651 Tadjeddine, 77
CO_3^-	6736 Moseley, 75 8643 Moseley, 76 9857 Vestal, 77	7477 Moseley, 75 8923 Cosby, 76	TII	9066 Kawasaki, 77	
H_2CO	7980 Guyon, 76		BrCN	10639 Kondow, 77	
N_1^{+1}	7475 Miller, 75	7476 Peterson, 75	CO_2	6539 Parr, 74 7134 Lee, 75 9221 Phillips, 77	6738 Koyano, 75 8983 Kronebusch, 76 10129 Slinger, 77
$(NO)_2^{+1}$	10126 Smith, 77		CS_2	7098 Lee, 75	9222 Black, 77
NO_3^-	10646 Cosby, 77		D_2O	10041 Macpherson, 77	
O_1^{+1}	9856 Vestal, 77	10126 Smith, 77	HCN	10639 Kondow, 77	
CCl_4	8284 Ambartzumian, 76		H_2O	7054 Yamashita, 75 8983 Kronebusch, 76	8775 McCulloh, 76 10041 Macpherson, 77
CH_1^{+1}	7051 Ensberg, 75	7586 Rigglin, 75	ICN	9304 Baronavski, 77	
CO_1^-	9857 Vestal, 77		N_2O	6739 Lee, 75 8982 Stone, 76	7637 Black, 75
CO_1^{+1}	10126 Smith, 77		NO_2	8031 Creel, 76	8792 Uselman, 76
SF_6	8642 Ambartsumyan, 76				
$C_4H_8^{+1}$	9372 Rigglin, 76				

PHOTON CROSS SECTION INDEX

DISSOCIATION EXPERIMENTAL			DISSOCIATION THEORETICAL		
Relative			Normalized		
OCS	7098 Lee, 75	7637 Black, 75	DCN	9486 Atabek, 77	9970 Beswick, 77
O ₃ ⁻	8923 Cosby, 76		HCN	9486 Atabek, 77	9970 Beswick, 77
BCl ₃	8359 Ambartsumyan, 76		ICN	9858 Beswick, 77	
C ₂ N ₂	10639 Kondow, 77		N ₂ O	9370 Shapiro, 77	
D ₂ CO	8322 Houston, 76		CO ₃ ⁻	6822 Cosby, 75	
H ₂ CO	8322 Houston, 76		Relative		
NH ₃	8323 Campbell, 76 8775 McCulloh, 76 9972 Di Stefano, 77	8739 Campbell, 76 8983 Kronebusch, 76			
CCl ₃ F	7704 Rebbert, 75	8198 Ajello, 76	D ₂	6540 Ford, 75	
CCl ₂ F ₂	7704 Rebbert, 75	8198 Ajello, 76	HD	6540 Ford, 75	
CH ₄	8338 McCulloh, 76	8983 Kronebusch, 76	H ₂	6540 Ford, 75	6735 Ford, 75
CH ₃ I ⁺¹	9682 McGilvery, 77		DCN	7311 Band, 75	
CO ₄ ⁻	8923 Cosby, 76		HCN	7106 Band, 75 10184 Atabek, 77	7311 Band, 75
C ₂ H ₄	7052 Stockbauer, 75		ICN	7106 Band, 75	10452 Atabek, 77
SF ₆	9173 Kolodner, 77 9744 Brunner, 77	9480 Campbell, 76	NO ₂	10185 Peterson, 77	
C ₆ H ₆	10381 Rosenstock, 77		CH ₄	7473 Watanabe, 75	

DISSOCIATION THEORETICAL

Normalized

Ar ⁺²	8256 Miller, 76
Ar ₂ ⁺¹	9763 Stevens, 77
HD ⁺¹	9690 Tadjeddine, 77
Li ₂ ⁺¹	8200 Kirby-Docken, 76
Na ₂ ⁺¹	8200 Kirby-Docken, 76
O ₂	8398 Kockarts, 76
BrCN	9858 Beswick, 77

IV. Bibliography

- 717 Somerville, W. B., The Continuous Absorption Coefficient of the Negative Hydrogen Molecular Ion, *Astrophys. J.* **139**, 192–197 (1964).
- 806 Kandel, R., L'Absorption Continue de l'Ion Negatif du Chlore C. R. Acad. Sci. **262**, 373–375 (1966).
- 851 Peach, G., Free-Free Absorption Coefficients for Non-Hydrogenic Atoms, *Mem. R. Astron. Soc.* **71**, 1–11 (1967).
- 1000 John, T. L., The Free-Free Transitions of the Negative Hydrogen Ion in the Exchange Approximation, *Mon. Not. R. Astron. Soc.* **128**, 93–102 (1964).
- 1005 Geltman, S., Continuum States of H^- and the Free-Free Absorption Coefficient, *Astrophys. J.* **141**, 376–394 (1965).
- 1362 Chandrasekhar, S., and Breen, F. H., On the Continuous Absorption Coefficient of the Negative Hydrogen Ion. III., *Astrophys. J.* **104**, 430–445 (1946).
- 1366 Ohmura, T., and Ohmura, H., Continuous Absorption Due to Free-Free Transitions in Hydrogen, *Phys. Rev.* **121**, 513–517 (1961).
- 1367 Ohmura, T., and Ohmura, H., Free-Free Absorption Coefficient of the Negative Hydrogen Ion, *Astrophys. J.* **131**, 8–11 (1960).
- 1750 McDowell, M. R. C., Williamson, J. H., and Myerscough, V. P., Continuous Absorption by He^- , *Astrophys. J.* **144**, 827–831 (1966).
- 1792 Doughty, N. A., and Fraser, P. A., The Free-Free Absorption Coefficient of the Negative Hydrogen Ion, *Mon. Not. R. Astron. Soc.* **132**, 267–282 (1966).
- 1795 John, T. L., The Free-Free Transitions of an Electron in the Field of a Hydrogen Atom at Infra-Red Frequencies, *Mon. Not. R. Astron. Soc.* **131**, 315–323 (1966).
- 1890 Myerscough, V. P., and McDowell, M. R. C., Continuous Absorption by the Carbon Negative Ion. II. Free-Free Absorption, *Mon. Not. R. Astron. Soc.* **132**, 457–461 (1966).
- 1908 Ashkin, M., Radiative Absorption Cross Section of an Electron in the Field of an Argon Atom, *Phys. Rev.* **141**, 41–45 (1966).
- 1927 Dalgarno, A., and Lane, N. F., Free-Free Transitions of Electrons in Gases, *Astrophys. J.* **145**, 623–633 (1966).
- 2220 Kandel, R., The Free-Free Absorption of Cl^- , *Ann. Astrophys.* **29**, 531–532 (1966).
- 2503 John, T. L., The Free-Free Transitions of He^- , *Mon. Not. R. Astron. Soc.* **138**, 137–141 (1968).
- 2847 Somerville, W. B., The Continuous Absorption Coefficient of He^- , *Astrophys. J.* **141**, 811–814 (1965).
- 5364 John, T. L., The Free-Free Transitions of Li^- , *J. Phys. B* **5**, 514–516 (1972).
- 5461 John, T. L., and Williams, A. R., The Continuous Absorption Coefficient of Ne^- , *Phys. Lett. A* **43**, 327–328 (1973).
- 5567 Hyman, H. A., and Kivel, B., A General Formula for Free-Free Absorption on Highly-Polarizable Neutral Atoms, *J. Quant. Spectrosc. Radiat. Transfer* **13**, 699–703 (1973).
- 5581 Geltman, S., Free-Free Radiation in Electron-Neutral Atom Collisions, *J. Quant. Spectrosc. Radiat. Transfer* **13**, 601–613 (1973).
- 5757 John, T. L., Morgan, D. J., and Williams, A. R., Multichannel Effects on the Free-Free Transition of Li^- at the Infra-Red Threshold, *J. Phys. B* **6**, L255–L257 (1973).
- 5874 John, T. L., Morgan, D. J., and Davies, D., The Free-Free Transitions of Cl^- , *Mon. Not. R. Astron. Soc.* **166**, 9P–10P (1974).
- 5876 John, T. L., and Williams, A. R., The Free-Free Transitions of Neon and Argon Negative Ions, *J. Phys. B* **6**, L384–L385 (1973).
- 6013 Stallcop, J. R., Free-free Absorption of Infrared Radiation in Collisions of Electrons with Neutral Rare-gas Atoms, *Astron. Astrophys.* **30**, 293–296 (1974).
- 6202 Stallcop, J. R., Absorption of Infrared Radiation by Electrons in the Field of a Neutral Hydrogen Atom, *Astrophys. J.* **187**, 179–183 (1974).
- 6401 John, T. L., Morgan, D. J., and Williams, A. R., The Free-Free Transitions of Li^- by a 'Multi-Channel Asymptotic Method', *J. Phys. B* **7**, 1990–1993 (1974).
- 6505 Jamieson, M. J., Impact Parameter Calculation of Electron Impact Excitation of Hydrogen, *Mol. Phys.* **29**, 633–634 (1975).
- 6506 Hunter, G., and Kuriyan, M., Two-Centre Wavefunctions in the Theory of Electron Scattering by Hydrogen Atoms, *Proc. R. Soc. London Ser. A* **341**, 491–515 (1975).
- 6507 Byron Jr., F. W., and Joachain, C. J., Ab-Initio Optical Model Theory of Elastic Electron-Atom Scattering, *Phys. Lett. A* **49**, 306–308 (1974).
- 6508 Aashamar, K., and Hambro, A. K., Correlation Effects in Elastic Electron-Helium Scattering, *Phys. Norv.* **7**, 107–112 (1974).
- 6509 Thomas, L. D., and Nesbet, R. K., Low-Energy Electron Scattering by Atomic Oxygen, *Phys. Rev. A* **11**, 170–173 (1975).
- 6510 Pindzola, M. S., and Kelly, H. P., Electron Excitation of the 2s and 2p States of Hydrogen from Threshold to 50 eV, *Phys. Rev. A* **11**, 221–229 (1975).
- 6511 Shyu, J. S., and Manson, S. T., Angular Distribution of Photoelectrons from the 4f Subshell of Mercury, *Phys. Rev. A* **11**, 166–169 (1975).
- 6512 Chang, T. N., and Poe, R. T., Many-Body-Theory Study of Lithium Photoionization, *Phys. Rev. A* **11**, 191–199 (1975).
- 6517 John, T. L., and Morgan, D. J., The Free-Free Transitions of the Negative Chlorine Ion, *Mon. Not. R. Astron. Soc.* **170**, 1–4 (1975).
- 6518 John, T. L., The Free-Free Transitions of Atomic and Molecular Negative Ions in the Infrared, *Mon. Not. R. Astron. Soc.* **170**, 5–6 (1975).
- 6527 Weigold, E., Hood, S. T., and McCarthy, I. E., Structure of Inert Gases from the (e,2e) Reaction, *Phys. Rev. A* **11**, 566–575 (1975).
- 6538 Petersen, H., Radler, K., Sonntag, B., and Haensel, R., Photoabsorption of Atomic Cs in the VUV, *J. Phys. B* **8**, 31–37 (1975).
- 6539 Parr, G. R., and Taylor, J. W., Photoionization Mass Spectrometry. IV. Carbon Dioxide, *Int. J. Mass Spectrom. Ion Phys.* **14**, 467–477 (1974).
- 6540 Ford, A. L., Docken, K. K., and Dalgarno, A., The Photoionization and Dissociative Photoionization of H_2 , HD, and D_2 , *Astrophys. J.* **195**, 819–824 (1975).
- 6541 Lewis, B. R., Weigold, E., and Teubner, P. J. O., The Inelastic Scattering of Electrons from Argon and Krypton, *J. Phys. B* **8**, 212–218 (1975).
- 6542 Beenakker, C. I. M., and De Heer, F. J., Dissociative Excitation of Some Aliphatic Hydrocarbons by Electron Impact, *Chem. Phys.* **7**, 130–136 (1975).
- 6543 Locht, R., and Schopman, J., The Dissociative Ionization in Oxygen, *Int. J. Mass Spectrom. Ion Phys.* **15**, 361–378 (1974).
- 6544 Narain, U., and Chandra, S., Excitation Cross Sections of $1'S \rightarrow m^1P$ Transitions in Helium by Electron Impact, *Physica (Utrecht)* **77**, 623–626 (1974).
- 6545 McConkey, J. W., and Preston, J. A., Differential Elastic Scattering of Electrons by the Rare Gases. I. Helium, *J. Phys. B* **8**, 63–74 (1975).
- 6546 Phaneuf, R. A., Crandall, D. H., and Dunn, G. H., Production of $D^*(n = 4)$ from Electron- D_2^+ Dissociative Recombination, *Phys. Rev. A* **11**, 528–535 (1975).

- 6547 Hayes, M. A., Calculated Collision Strengths for Electron Impact Excitation of N V, *J. Phys. B* **8**, L8-L11 (1975).
- 6548 Banyard, K. E., and Seddon, G. J., Electron Correlation and Elastic Scattering Cross Sections for He, *J. Phys. B* **8**, 20-24 (1975).
- 6549 Peart, B., and Dolder, K. T., Measurements of Cross Sections for Inner- and Outer-Shell Ionization of Rb^+ , Cs^+ , Ca^+ and Sr^+ Ions by Electron Impact, *J. Phys. B* **8**, 56-62 (1975).
- 6550 Winter, T. G., and Lane, N. F., The Fredholm Method in Low Energy Electron-Molecule Scattering: Static Exchange, *Chem. Phys. Lett.* **30**, 363-366 (1975).
- 6551 Rescigno, T. N., McCurdy Jr., C. W., and McKoy, V., Low-Energy $e^- \text{H}_2$ Elastic Cross Sections Using Discrete Basis Functions, *Phys. Rev. A* **11**, 825-829 (1975).
- 6552 Callaway, J., and Wooten, J. W., Excitation of Hydrogen Atoms by Electron Impact at Intermediate Energies, *Phys. Rev. A* **11**, 1118-1120 (1975).
- 6553 Andrick, D., and Bitsch, A., Experimental Investigation and Phase Shift Analysis of Low-Energy Electron-Helium Scattering, *J. Phys. B* **8**, 393-410 (1975).
- 6554 Bates, D. R., and Snyder, R., Application of Classical Finite Characteristic Collision Time Approximation to Ionization of Atomic Hydrogen by Electron Impact, *J. Phys. B* **8**, 411-416 (1975).
- 6555 Gupta, S. C., and Rees, J. A., Differential Cross Sections for the Elastic Scattering of Electrons by Neon, *J. Phys. B* **8**, 417-425 (1975).
- 6556 Seaton, M. J., Collision Strengths for [N II], [O III], [Ne II] and [Ne III], *Mon. Not. R. Astron. Soc.* **170**, 475-486 (1975).
- 6557 Herzenberg, A., and Ton-That, D., Electron Scattering at a Threshold Above a Resonance: Helium, *J. Phys. B* **8**, 426-441 (1975).
- 6558 Ziesel, J. P., Schulz, G. J., and Milhaud, J., S Formation by Dissociation Attachment in OCS and CS_2 , *J. Chem. Phys.* **62**, 1936-1940 (1975).
- 6559 Flannery, M. R., Morrison, W. F., and Richmond, B. L., Excitation in Electron-Metastable Helium Collisions, *J. Appl. Phys.* **46**, 1186-1190 (1975).
- 6560 Heideman, H. G. M., Van Ittersum, T., Nienhuis, G., and Hol, V. M., The Effect of Post-Collision Interaction in $n^3\text{S}$ Excitation of Helium by Electrons, *J. Phys. B* **8**, L26-L28 (1975).
- 6561 Czyzak, S. J., Aller, L. H., and Euwema, R. N., Forbidden-Line Excitation Data for Certain Coronal Lines, *Astrophys. J. Suppl. Ser.* **28**, 465-470 (1974).
- 6562 Miller, K. J., Study of Cross Sections, Oscillator Strengths Generalized Oscillator Strengths, and Atomiclike Character of the Molecular Orbitals of Formaldehyde for Inelastic Transitions to Valence and Rydberg States, *J. Chem. Phys.* **62**, 1759-1768 (1975).
- 6563 Klump, K. N., and Lassette, E. N., Electrostatic Polarization in the Exchange Scattering of Electrons of High Kinetic Energy. $1^1\text{S} \rightarrow 2^1\text{S}$ Transition in Helium. Singlet-Triplet Excitation in CO, *J. Chem. Phys.* **62**, 1838-1841 (1975).
- 6568 Bell, K. L., Kingston, A. E., and McIlveen, W. A., The Total Absorption Coefficient of the Negative Hydrogen Ion, *J. Phys. B* **8**, 358-364 (1975).
- 6579 Kasdan, A., Herbst, E., and Lineberger, W. C., Laser Photoelectron Spectrometry of CH, *Chem. Phys. Lett.* **31**, 78-82 (1975).
- 6580 Watson, W. S., Stewart, D. T., Gardner, A. B., and Lynch, M. J., The Photoabsorption Coefficients of CO and CO_2 in the Region 350 to 650 Å, *Planet. Space Sci.* **23**, 384-386 (1975).
- 6581 Deaton, T. F., Depatie, D. A., and Walker, T. W., Absorption Coefficient Measurements of Nitrous Oxide and Methane at DF Laser Wavelengths, *Appl. Phys. Lett.* **26**, 300-303 (1975).
- 6582 Ederer, D. L., Lucatorto, T. B., Saloman, E. B., Madden, R. P., and Sugar, J., Photoabsorption of the 4d Electrons in Barium, *J. Phys. B* **8**, L21-L25 (1975).
- 6583 Bourg-Heckly, G., Petitdidier, M., and Gieslik, S., Internal Partition Function for the NO Molecule: Integrated Line Absorption Cross-Sections for the $\text{A}^2\Sigma \rightarrow \text{X}^2\Pi$ $\gamma(1-0)$ and $\gamma(2-0)$ Bands, *J. Quant. Spectrosc. Radiat. Transfer* **15**, 405-410 (1975).
- 6584 Dey, S., McCarthy, I. E., Teubner, P. J. O., and Weigold, E., (e,2e) Probe for Hydrogen Molecule Wave Functions, *Phys. Rev. Lett.* **34**, 782-785 (1975).
- 6587 Dutton, J., Harris, F. M., and Jones, R. A., Total Cross Sections for the Scattering of 50-400 eV Positrons by Helium, *J. Phys. B* **8**, L65-L69 (1975).
- 6588 Dewar, M. J. S., Komornicki, A., Thiel, W., and Schweig, A., Calculation of Photoionization Cross Sections Using Ab-Initio Wavefunctions and the Plane Wave Approximation, *Chem. Phys. Lett.* **31**, 286-290 (1975).
- 6589 Chang, T. N., Influence of Electronic Correlation Effects on the Photoionization of Sodium and Potassium, *J. Phys. B* **8**, 743-750 (1975).
- 6590 Cukier, M., Dhez, P., Jaegle, P., and Farnoux, F. C., Photoionization Cross Section of Iridium in the Soft X-Ray Region, *Phys. Lett. A* **51**, 173-174 (1975).
- 6591 Wendin, G., Generalization of the RPAE: 4d-Photoabsorption in Atomic Ba Including Relaxation Effects, *Phys. Lett. A* **51**, 291-292 (1975).
- 6592 Chandra, S., and Narain, U., Electron Impact Ionization Cross Sections of Some Members of the Helium Isoelectronic Series, *J. Phys. B* **8**, 770-773 (1975).
- 6593 Cadez, I. M., Tronc, M., and Hall, R. I., Dissociative Electron Attachment in CO: Angular Distribution of the O^- Ions, *J. Phys. B* **8**, L73-L76 (1975).
- 6594 Kumar, S., Srivastava, M. K., and Tripathi, A. N., Intermediate Energy $e^- \text{Li}^+$ Elastic Scattering in Eikonal Approximation, *J. Phys. B* **8**, 612-620 (1975).
- 6595 Robb, W. D., Close-Coupling Calculations for Electron Impact Excitation of N^+ , *J. Phys. B* **8**, L46-L49 (1975).
- 6596 Nygaard, K. J., Inner-Shell Excitation-Ionization in Potassium by Electron Impact, *Phys. Lett. A* **51**, 171-172 (1975).
- 6597 Narumi, H., and Tsuji, A., Inelastic Coulomb Scattering in the Glauber Approximation, *Prog. Theor. Phys.* **53**, 671-676 (1975).
- 6598 Jones, M., Collision Strengths for the Electron-Impact Excitation of Certain Highly-Ionized Helium-Like Ions, *Mon. Not. R. Astron. Soc.* **169**, 211-227 (1975).
- 6599 Williams, W., and Trajmar, S., Elastic and Inelastic Scattering of 40 eV Electrons from Atomic Lead, *J. Phys. B* **8**, L50-L53 (1975).
- 6606 John, T. L., and Williams, R. J., The Continuous Absorption Coefficient of the Negative Oxygen Ion in the Infrared, *Mon. Not. R. Astron. Soc.* **171**, 7P-9P (1975).
- 6607 Williamson Jr., W., and Greene, T. J., Electron Excitation Cross Sections for Neutral Beryllium Atoms, *J. Chem. Phys.* **62**, 2515-2517 (1975).
- 6608 Dillon, M. A., and Lassette, E. N., A Collision Cross Section Study of $1^1\text{S} \rightarrow 2^1\text{P}$ and $1^1\text{S} \rightarrow 2^1\text{S}$ Transitions in Helium at Kinetic Energies from 200-700 eV. Failure of the Born Approximation at Large Momentum Changes, *J. Chem. Phys.* **62**, 2373-2390 (1975).
- 6617 Chopra, P. D., and Heddle, D. W. O., Polarization Free Measurements of Rayleigh Scattering of Lyman α , *J. Phys. B* **7**, 2421-2428 (1974).

- 6618 Bransden, B. H., and Hutt, P. K., Electron and Positron Scattering by Helium and Neon, *J. Phys. B* **8**, 603-611 (1975).
- 6619 Kadota, K., and Kaneko, Y., Neutralization Method for Detection of Metastable Ions and Its Application to the Production of Metastable Rare Gas Ions by Electron Impact, *J. Phys. Soc. Jpn.* **38**, 524-531 (1975).
- 6620 Bell, K. L., Kingston, A. E., and McIveen, W. A., The Free-Free Absorption Coefficient of the Negative Ion of Molecular Hydrogen, *J. Phys. B* **8**, 659-664 (1975).
- 6626 Winters, K. H., The Interaction of Fast Electrons with Light Atoms, Thesis, University of Durham, Durham, England, 121 pages plus appendices (1974).
- 6642 Lee, C. M., Multichannel Photodetachment Theory, *Phys. Rev. A* **11**, 1692-1699 (1975).
- 6643 Dill, D., Starace, A. F., and Manson, S. T., Effects of Anisotropic Electron-Ion Interactions in Atomic Photoelectron Angular Distributions, *Phys. Rev. A* **11**, 1596-1606 (1975).
- 6644 Dillon, M. A., and Lassette, E. N., Test of Born Approximation on the 60 eV Autoionized Transition in Helium, *J. Chem. Phys.* **62**, 4240-4241 (1975).
- 6645 Wankenne, H., Bolduc, E., and Marmet, P., Ionisation Dissociative de N_2 , *Can. J. Phys.* **53**, 770-774 (1975).
- 6646 Williams, W., Trajmar, S., and Kuppermann, A., Angular Distributions in the Electron Impact Excitation of Xe at 20 eV, *J. Chem. Phys.* **62**, 3031-3035 (1975).
- 6647 Junker, B. R., Modified Born Model for Excitation of Atoms by Electrons, *Phys. Rev. A* **11**, 1552-1559 (1975).
- 6648 Ferendeci, A. M., Electron Excitation Cross Section of the He 2 ^1S State from Diffraction Losses in a He-Ne Gas Laser Phys. Rev. A **11**, 1576-1582 (1975).
- 6649 Chutjian, A., and Thomas, L. D., Experimental and (First-Order Many-Body) Theoretical Differential and Integral Cross Sections for Excitation of the $n=3$ States of He by Electron Impact at 29.2 and 39.7 eV, *Phys. Rev. A* **11**, 1583-1595 (1975).
- 6650 Aleksakhin, I. S., Bogachev, G. G., and Zapesochnyi, I. P., Excitation of $nsnp\ ^2S_{1/2}$ States in Collisions of Alkali Atoms with Electrons, *Opt. Spectrosc. (USSR)* **38**, 107 (1975).
- 6651 Nepiykov, E. I., Excitation of s Electrons in Indium and Gallium Atoms, *Opt. Spectrosc. (USSR)* **38**, 106 (1975).
- 6652 Sinanoglu, O., and Davis, S. L., The Large Effects of Electron Correlation on the Multiplet Generalized Oscillator Strengths of Non Closed Shell Systems: Be $1s^2 2s^2\ ^1S \rightarrow 1s^2 2s 2p\ ^1P^o$ and B $1s^2 2s 2p\ ^2P^o \rightarrow 1s^2 2s 2p^2\ ^2D$, *Chem. Phys. Lett.* **32**, 449-454 (1975).
- 6666 Rundel, R. D., Dunning, F. B., Goldwire Jr., H. C., and Stebbings, R. F., Near-Threshold Photoionization of Xenon Metastable Atoms, *J. Opt. Soc. Am.* **65**, 628-633 (1975).
- 6667 Ederer, D. L., and Manalis, M., Photoabsorption of the 4d Electrons in Xenon, *J. Opt. Soc. Am.* **65**, 634-637 (1975).
- 6668 Huber, M. C. E., Sandeman, R. J., and Tubbs, E. F., The Spectrum of Cr I between 179.8 and 200 nm Wavelengths, Absorption Cross Sections, and Oscillator Strengths, *Proc. R. Soc. London Ser. A* **342**, 431-438 (1975).
- 6669 Feldmann, D., Photodetachment Measurements of H^- Near Threshold, *Phys. Lett. A* **53**, 82 (1975).
- 6670 Kleimenov, V. I., Chizhov, Yu. V., and Vilesov, F. I., Study of Autoionization Processes in Nitric Oxide by Photoelectron Spectroscopy, *Opt. Spectrosc. (USSR)* **32**, 371-374 (1972).
- 6682 Nygaard, K. J., Electron Impact Autoionization in Heavy Alkali Metals, *Phys. Rev. A* **11**, 1475-1478 (1975).
- 6683 Oppenheimer, M., Doyle, H., and Dalgarno, A., Bound State Methods for Elastic Scattering Phase Shifts, *Chem. Phys. Lett.* **32**, 6-10 (1975).
- 6684 Register, D., and Poe, R. T., Algebraic Variational Method-A Quantitative Assessment in e^-H Scattering, *Phys. Lett. A* **51**, 431-433 (1975).
- 6685 Robb, W. D., Rountree, S. P., and Burnett, T., Electron-Impact Ionization Cross Sections and Bound-Free Generalized Oscillator Strengths for Atomic Systems, *Phys. Rev. A* **11**, 1193-1199 (1975).
- 6686 Aleksakhin, I. S., and Shafranyosh, I. I., Study of Electron Impact Ionization from the Excited States of Strontium Atoms *Ukr. Fiz. Zh. Ukr. Ed.* **19**, 1843-1847 (1974).
- 6688 Dixon, A. J., Von Engel, A., and Harrison, M. F. A., A Measurement of the Electron Impact Ionization Cross Section of Atomic Hydrogen in the Metastable 2S State, *Proc. R. Soc. London Ser. A* **343**, 333-349 (1975).
- 6689 Lewis, J. W. L., Price, L. L., and Powell, H. M., Electron Excitation Cross Sections of $N_2^+ B^2\Sigma_u^+$, N I, and N II States and Their Temperature Dependence, *Phys. Rev. A* **11**, 1214-1222 (1975).
- 6691 Bogdanova, I. P., and Marusin, V. D., Determination of the Efficiency of Electron-Impact Excitation of a Metastable 2^1S Helium Level, *Opt. Spectrosc. (USSR)* **38**, 108-109 (1975).
- 6692 Lins De Barros, H. G. P., and Brandi, H. S., Electron Excitation in Noble Gases, *Can. J. Phys.* **53**, 689-699 (1975).
- 6693 Misakian, M., Mumma, M. J., and Faris, J. F., Angular Distributions, Kinetic Energy Distributions, and Excitation Functions of Fast Metastable Oxygen Fragments Following Electron Impact on CO_2 , *J. Chem. Phys.* **62**, 3442-3453 (1975).
- 6694 Beenakker, C. I. M., and De Heer, F. J., Dissociative Excitation of Acetylene by Electron Impact, *Chem. Phys.* **6**, 291-300 (1974).
- 6695 Beenakker, C. I. M., and De Heer, F. J., Dissociative Excitation of Benzene by Electron Impact, *Chem. Phys. Lett.* **29**, 89-92 (1974).
- 6696 Beenakker, C. I. M., De Heer, F. J., and Oosterhoff, L. J., $^1B_{2u}-^1A_{1g}$ Fluorescence from Benzene Produced by Electron Impact (30-1000 eV), *Chem. Phys. Lett.* **28**, 320-323 (1974).
- 6697 Beenakker, C. I. M., De Heer, F. J., and Oosterhoff, L. J., $^1B_{2u}-^1A_{1g}$ Fluorescence from Benzene Produced by Electron Impact (0-30 eV), *Chem. Phys. Lett.* **28**, 324-327 (1974).
- 6698 Alhat, R., Gruen, N., and Wirsam, B., Calculated Born and Four-State Cross Sections of Low Lying Ar Levels Excited by Proton and Electron Impact, *J. Phys. B* **8**, L82-L85 (1975).
- 6699 Crandall, D. H., Phaneuf, R. A., and Dunn, G. H., Electron Impact Excitation of Hg^+ , *Phys. Rev. A* **11**, 1223-1232 (1975).
- 6700 Williams, W., Trajmar, S., and Bozins, D. G., Elastic and Inelastic Scattering of 40 eV Electrons from Atomic and Molecular Bismuth, *J. Phys. B* **8**, L96-L99 (1975).
- 6701 Dube, L., and Herzenberg, A., Resonant Electron-Molecule Scattering: The Impulse Approximation in N_2O , *Phys. Rev. A* **11**, 1314-1325 (1975).
- 6702 Brandt, M. A., and Truhlar, D. G., Ab initio Cross Sections for Excitation of the 2p State of Hydrogen by Electron Impact at Intermediate Energies, *Phys. Rev. A* **11**, 1340-1346 (1975).
- 6703 Kutcher, G. J., Szydluk, P. P., and Green, A. E. S., Independent-Particle-Model Study of Electrons Elastically Scattering from Oxygen, *Phys. Rev. A* **10**, 842-850 (1974).
- 6708 Dehmer, P. M., and Chupka, W. A., High Resolution Study of Photoionization Processes in O_2 , *J. Chem. Phys.* **62**, 4525-4534 (1975).
- 6709 Rousseau, D. L., Patterson, G. D., and Williams, P. F., Resonance Raman Scattering and Collision-Induced Redistribution Scattering in I_2 , *Phys. Rev. Lett.* **34**, 1306-1309 (1975).
- 6710 Robrish, P., Rosen, H., and Chamberlain, O., Study of the Quenching of Inelastic Light Scattering Near an Isolated Resonance in I_2 Vapor, *Phys. Lett. A* **51**, 434-436 (1975).

- 6711 Yurev, M. S., Two-Electron Photoionization of the Helium Atom Near Threshold, *Opt. Spectrosc. (USSR)* **38**, 4-5 (1975).
- 6724 Parr, A. C., and Inghram, M. G., Photoionization of Samarium in the Threshold Region, *J. Opt. Soc. Am.* **65**, 613-614 (1975).
- 6725 Chihisov, M. L., Ionization with Excitation or Removal of Several Electrons, *Opt. Spectrosc. (USSR)* **38**, 130-133 (1975).
- 6726 Hutt, P. K., A Phase Shift Analysis of Electron-Atom Scattering, VII. Revised (1975) Results for Mercury at Low Energies, *J. Phys. B* **8**, L88-L91 (1975).
- 6735 Ford, A. L., and Docken, K. K., Ion Kinetic Energy Distributions from Dissociative Photoionization of Molecular Hydrogen, *J. Chem. Phys.* **62**, 4955-4957 (1975).
- 6736 Moseley, J. T., Cosby, P. C., Bennett, R. A., and Peterson, J. R., Photodissociation and Photodetachment of Molecular Negative Ions. I. Ions Formed in $\text{CO}_2/\text{H}_2\text{O}$ Mixtures, *J. Chem. Phys.* **62**, 4826-4834 (1975).
- 6737 Martin, I., and Simons, G., New Procedure for Generating Valence and Rydberg Orbitals. II. Atomic Photoionization Cross Sections, *J. Chem. Phys.* **62**, 4799-4803 (1975).
- 6738 Koyano, I., Wauchop, T. S., and Welge, K. H., Relative Efficiencies of $\text{O}(\text{S})$ Production from Photodissociation of CO_2 Between 1080 and 1160 Å, *J. Chem. Phys.* **63**, 110-112 (1975).
- 6739 Lee, L. C., Carlson, R. W., Judge, D. L., and Ogawa, M., Vacuum Ultraviolet Fluorescence from Photodissociation Fragments of N_2O , *J. Phys. B* **8**, 977-982 (1975).
- 6740 Ho, Y. K., Fraser, P. A., and Kraidy, M., The S-Wave Elastic Scattering of Positrons by Helium in the Coupled Static Approximation, *J. Phys. B* **8**, 1289-1301 (1975).
- 6741 Eyb, M., and Hofmann, H., Elastic Electron-Alkali Atom Scattering Near the First Inelastic Threshold, *J. Phys. B* **8**, 1095-1108 (1975).
- 6742 Bransden, B. H., and Issa, M. R., The Use of Second-Order Potentials in the Theory of Scattering of Charged Particles by Atoms VIII. The Excitation of the $n = 3$ Levels of Helium by Electron and Proton Impact, *J. Phys. B* **8**, 1088-1094 (1975).
- 6743 Presnyakov, L. P., and Urnov, A. M., Asymptotic Approach to the Theory of Excitation of Multiply-Charged Ions by Electron Impact, *J. Phys. B* **8**, 1280-1288 (1975).
- 6744 Swanson, N., Celotta, R. J., Kuyatt, C. E., Cooper, J. W., Resonant Structure in Electron Impact Excitation of CO Near Threshold, *J. Chem. Phys.* **62**, 4880-4888 (1975).
- 6745 Kumar, S., Tripathi, A. N., and Srivastava, M. K., e^- -H⁺ Elastic Scattering in Eikonal Approximation, *J. Phys. B* **8**, 1082-1087 (1975).
- 6746 Rudge, M. R. H., On the Variational Determination of Phase Shifts for e^- -H Elastic Scattering, *J. Phys. B* **8**, 940-946 (1975).
- 6747 Chandra, N., Rotational Excitation in e^- - N_2 Scattering, *J. Phys. B* **8**, 1338-1348 (1975).
- 6748 Tiwary, S. N., and Rai, D. K., Electron Impact Excitation of the Lowest Autoionizing Level in Alkali Metal Atoms, *J. Phys. B* **8**, 1109-1113 (1975).
- 6749 Ajello, J. M., Pang, K. D., and Monahan, K. M., Formation of O_3^+ by the Reaction of Metastable O_2^+ Ions with O_2 , *J. Chem. Phys.* **61**, 3152-3154 (1974).
- 6750 McDowell, M. R. C., Morgan, L. A., and Myerscough, V. P., Electron Impact Excitation of H and He^+ III. $1s \rightarrow np$ Transitions, *J. Phys. B* **8**, 1053-1072 (1975).
- 6751 Trone, M., Huetz, A., Landau, M., Pichou, F., and Reinhardt, J., Resonant Vibrational Excitation of the NO Ground State by Electron Impact in the 0.1-3 eV Energy Range, *J. Phys. B* **8**, 1160-1169 (1975).
- 6786 Bell, K. L., Kingston, A. E., and McIlveen, W. A., The Free-Free Absorption Coefficient of the Negative Helium Ion, *J. Phys. B* **8**, 1453-1458 (1975).
- 6788 Kollmann, K., Ion Pair Production by Electron Impact on H_2 and CO: Kinetic Energy Distributions and Threshold Behavior, *J. Chem. Phys.* **63**, 1314-1316 (1975).
- 6789 Greene, T. J., and Williamson Jr., W., Calculated Electron Excitation Cross Sections for the Alkalis, *At. Data Nucl. Data Tables* **14**, 161-175 (1974).
- 6790 Schiavone, J. A., Smyth, K. C., and Freund, R. S., Dissociative Excitation of H_2 by Electron Impact: Translational Spectroscopy of Long Lived High Rydberg Fragment Atoms, *J. Chem. Phys.* **63**, 1043-1051 (1975).
- 6791 Chandra, S., and Narain, U., Electron Impact Ionization Cross Sections of N_2 and O_2 , *Can. J. Phys.* **53**, 1044-1046 (1975).
- 6792 Flannery, M. R., and McCann, K. J., A Ten-Channel Eikonal Treatment of Differential and Integral Cross Sections and of the (λ, κ) Parameters for the $n = 2$ and 3 Excitations of Helium by Electron Impact, *J. Phys. B* **8**, 1716-1733 (1975).
- 6793 Buckley, B. D., and Walters, H. R. J., Second Born Approximation to Electron and Positron Impact Excitations of the $1^1\text{S} \rightarrow 2^1\text{S}$ Transition in Helium, *J. Phys. B* **8**, 1693-1715 (1975).
- 6794 Williams, J. F., Electron Scattering from Hydrogen Atoms II. Elastic Scattering at Low Energies from 0.5 to 8.7 eV, *J. Phys. B* **8**, 1683-1692 (1975).
- 6795 Williams, J. F., and Willis, B. A., The Scattering of Electrons from Inert Gases I. Absolute Differential Elastic Cross Sections for Argon Atoms, *J. Phys. B* **8**, 1670-1682 (1975).
- 6796 Saha, B. C., Ghosh, A. S., and Sil, N. C., Elastic and Inelastic Electron-Hydrogen Scattering by the Faddeev Approach, *J. Phys. B* **8**, 1627-1640 (1975).
- 6797 Walker, D. W., Low-Energy Electron Scattering from Mercury, *J. Phys. B* **8**, L161-L163 (1975).
- 6798 Rohr, K., and Linder, F., Vibrational Excitation in e^- -HCl Collisions at Low Energies, *J. Phys. B* **8**, L200-L204 (1975).
- 6799 Azria, R., and Schulz, G. J., Vibrational and Triplet Excitation by Electron Impact in Benzene, *J. Chem. Phys.* **62**, 573-575 (1975).
- 6800 Bui, T. D., Elastic Scattering of Positrons by Sodium Atoms, *J. Phys. B* **8**, L153-L156 (1975).
- 6801 Jaduszliwer, B., Nakashima, A., and Paul, D. A. L., The Scattering of Positrons by Helium: Total Cross Sections up to 270 eV, *Can. J. Phys.* **53**, 962-967 (1975).
- 6802 Nygaard, K. J., and Hahn, Y. B., Ion Fluorescence in Cesium, *Physica (Utrecht)* **75**, 333-340 (1974).
- 6803 Crowe, A., and McConkey, J. W., Dissociative Ionization by Electron Impact IV. Energy and Angular Distributions of N^{2+} from N_2 , *J. Phys. B* **8**, 1765-1769 (1975).
- 6804 Du Bois, R. D., and Rudd, M. E., Absolute Differential Cross Sections for 20-800 eV Electrons Elastically Scattered from Argon, *J. Phys. B* **8**, 1474-1483 (1975).
- 6805 Peart, B., and Dolder, K. T., Collisions Between Electrons and H_2^+ Ions VI. Measurements of Cross Sections for the Simultaneous Production of H^+ and H^- , *J. Phys. B* **8**, 1570-1574 (1975).
- 6806 Gregory, D., and Fink, M., Theoretical Electron Scattering Amplitudes and Spin Polarizations, *At. Data Nucl. Data Tables* **14**, 39-87 (1974).
- 6807 Jhanwar, B. L., Khare, S. P., and Shobha, P., Elastic Scattering of Electrons by Hydrogen Atoms at Intermediate Energies, *J. Phys. B* **8**, 1228-1235 (1975).
- 6808 Madan, R. N., Glauber Exchange Amplitudes, *Phys. Rev. A* **11**, 1968-1972 (1975).
- 6809 Vogler, M., and Dunn, G. H., Dissociative Recombination of Electrons and D_2^+ to Yield $\text{D}(2p)$, *Phys. Rev. A* **11**, 1983-

- 1987 (1975).
- 6810 Berrington, K. A., Burke, P. G., and Sinfaiam, A. L., Low Energy Scattering of Electrons by Helium Atoms, *J. Phys. B* **8**, 1459-1473 (1975).
- 6811 Schneider, B. L., R-Matrix Theory for Electron-Molecule Collisions Using Analytic Basis Set Expansions. II. Electron- H_2 Scattering in the Static-Exchange Model, *Phys. Rev. A* **11**, 1957-1962 (1975).
- 6812 Showalter, J. G., and Kay, R. B., Absolute Measurement of Total Electron-Impact Cross Sections to Singlet and Triplet Levels in Helium, *Phys. Rev. A* **11**, 1899-1910 (1975).
- 6819 Weisheit, J. C., and Shore, B. W., Plasma-Screening Effects Upon Atomic Hydrogen Photoabsorption, *Astrophys. J.* **194**, 519-523 (1974).
- 6821 Bransden, B. H., and Winters, K. H., The Use of Second-Order Potentials in the Theory of Scattering of Charged Particles by Atoms IX. The Excitation of Hydrogen and Helium to the $n = 2, S$ Levels by Electron Impact, *J. Phys. B* **8**, 1236-1244 (1975).
- 6822 Cosby, P. C., and Moseley, J. T., Photodissociation Spectrum of CO_3^- : Evidence for a Bound Excited State, *Phys. Rev. Lett.* **34**, 1603-1606 (1975).
- 6823 Lin, C.-P., Cheng, K.-T., and Johnson, W. R., Rayleigh Scattering of Photons by Helium, *Phys. Rev. A* **11**, 1946-1956 (1975).
- 6824 Amusia, M. Ya., Drukarev, E. G., Gorshkov, V. G., and Kazachkov, M. P., Two-Electron Photoionization of Helium, *J. Phys. B* **8**, 1248-1266 (1975).
- 6827 Campeanu, R. I., and Humberston, J. W., The Scattering of p-Wave Positrons by Helium, *J. Phys. B* **8**, L244-L248 (1975).
- 6828 Gryzinski, M., Low Energy Scattering and the "Free-Fall" Atomic Model, *J. Chem. Phys.* **62**, 2629-2636 (1975).
- 6829 Smyth, K. C., Schiavone, J. A., and Freund, R. S., Electron Impact Excitation of Fluorescence in Benzene, Toluene, and Aniline, *J. Chem. Phys.* **61**, 1782-1788 (1974).
- 6830 Smyth, K. C., Schiavone, J. A., and Freund, R. S., Electron Impact Excitation of Metastable States of Benzene, Toluene, and Aniline, *J. Chem. Phys.* **61**, 1789-1796 (1974).
- 6831 Bolduc, E., and Marmet, P., Resonances in the Total Electron-Impact Excitation Cross Section of Metastable States of Helium near 60 eV, *J. Phys. B* **8**, L241-L243 (1975).
- 6832 Pichou, F., Huetz, A., Joyez, G., Landau, M., and Mazeau, J., Electron Impact Excitation of the 2^3S State of Helium: Absolute Differential Cross Section from Threshold to 3.6 eV Above, *J. Phys. B* **8**, L236-L240 (1975).
- 6833 Andrick, D., and Langhans, L., Search for Additional Resonances in e^- -Helium Scattering Below the First Excitation Threshold, *J. Phys. B* **8**, 1245-1247 (1975).
- 6834 Imre, A. I., Dashchenko, A. I., Dansh, F. F., and Matei, F. F., Excitation of Kr III Spectral Lines When Slow Electrons Collide with Doubly-Charged Krypton Ions, *Ukr. Fiz. Zh. Ukr. Ed.* **19**, 1729-1731 (1974).
- 6835 Mityureva, A. A., and Penkin, N. P., Excitation of Neon and Helium Lines in Collision between Electrons and Metastable Atoms, *Opt. Spectrosc. (USSR)* **38**, 229-230 (1975).
- 6836 Aleksakhin, I. S., Zapesochnyi, I. P., Garga, I. I., and Starodub, V. P., Excitation of Alkaline-Earth Atoms by Electron Impact. 5: Barium, *Opt. Spectrosc. (USSR)* **38**, 126-129 (1975).
- 6837 Vanderpoorten, R., A Local Optical Potential Study of Elastic Electron-Atom Scattering, *J. Phys. B* **8**, 926-939 (1975).
- 6838 McDowell, M. R. C., Morgan, L. A., and Myerscough, V. P., Electron Impact Excitation of H and He^+ V. Differential Cross Sections for the Excitation of the $n = 2$ Levels of Atomic Hydrogen at Intermediate Energies, *J. Phys. B* **8**, 1838-1850 (1975).
- 6839 Scott, T., and McDowell, M. R. C., Electron Impact Excitation of n^1S and n^3S States of He at Intermediate Energies, *J. Phys. B* **8**, 1851-1865 (1975).
- 6858 Pohl, J., Anregungsquerschnitte für Elektronenstoß Gemessen am Natrium bei Kleinen Teilchendichten, *Z. Phys. A* **273**, 19-21 (1975).
- 6859 Spence, D., Electron Correlation Effects Near Threshold for Electron-Impact Ionization of Helium, *Phys. Rev. A* **11**, 1539-1542 (1975).
- 6860 Gupta, S. C., and Rees, J. A., Absolute Differential Cross Sections for 100 eV Electrons Elastically Scattered by Helium, Neon, and Argon, *J. Phys. B* **8**, 1267-1274 (1975).
- 6861 Marmet, P., Relative Cross Sections in Electroionization, *J. Chem. Phys.* **63**, 249-255 (1975).
- 6867 Roy, D., and Carrette, J.-D., Resonances in Differential Electron Excitation Cross Section of Argon in the Autoionization Region, *J. Phys. B* **8**, L157-L160 (1975).
- 6868 Jung, K., Schubert, E., Paul, D. A. L., and Ehrhardt, H., Angular Correlation of Outgoing Electrons Following Ionization of H_2 and N_2 by Electron Impact, *J. Phys. B* **8**, 1330-1337 (1975).
- 6869 Narain, U., and Chandra, S., Coulomb Effects and Vriens' Approach, *Phys. Lett. A* **50**, 355-356 (1974).
- 6870 Peart, B., and Dolder, K. T., Measurements of Cross Sections for the Production of Protons by Collisions Between Electrons and Vibrationally De-Excited H_3^+ Ions, *J. Phys. B* **8**, L143-L145 (1975).
- 6871 Gryzinski, M., Classical Theory of Atomic Collisions. II. Low Energy Scattering, *J. Chem. Phys.* **62**, 2620-2628 (1975).
- 6872 Weingartshofer, A., Clarke, E. M., Holmes, J. K., and McGowan, J. W., Resonances and Their Effects Above and Below the Electron-Impact Ionization Threshold of H_2 , *J. Phys. B* **8**, 1552-1569 (1975).
- 6873 Wells, C. A., and Miller, K. J., Effect of a Superposition of Configurations on the Generalized Oscillator Strengths and Elastic and Inelastic Total Cross Sections for the $3p$ to $4s$, $4p$, and nd ($n \leq 7$) Transitions in Aluminum, *Phys. Rev. A* **12**, 17-25 (1975).
- 6878 Williams, W., and Bozini, D. G., Electron Impact Excitation of Zinc Vapor at 40 eV, *Phys. Rev. A* **12**, 57-59 (1975).
- 6879 Weigold, E., Ugbabe, A., and Teubner, P. J. O., Observation of Autoionizing Transitions in Helium Using the (e,2e) Technique, *Phys. Rev. Lett.* **35**, 209-212 (1975).
- 6880 Kelman, V. A., Dashchenko, A. I., Zapesochnyi, I. P., and Imre, A. I., Effective Cross Section for Mg II Resonance Doublet Excitation in Electron-Ion Collisions, *Sov. Phys. Dokl.* **20**, 38-39 (1975).
- 6881 Ashihara, O., Shimamura, I., and Takayanagi, K., Low-Energy Electron Scattering from Strongly Polar Molecules. I. Glauber Approximation, *J. Phys. Soc. Jpn.* **38**, 1732-1741 (1975).
- 6882 Levin, V. G., Neudatchin, V. G., Pavlitchenkov, A. V., and Smirnov, Yu. F., On the Display of Basic Properties of the Molecular Electronic Wavefunctions in the (e,2e) Quasielastic Knockout Experiments, *J. Chem. Phys.* **63**, 1541-1546 (1975).
- 6883 Suzuki, T., Tanaka, H., Saito, M., and Igawa, H., Resonance Scattering of Electrons by Neon. I. Theoretical Evaluation of Differential Cross-Section, *J. Phys. Soc. Jpn.* **39**, 195-199 (1975).
- 6884 Suzuki, T., Tanaka, H., Saito, M., and Igawa, H., Resonance Scattering of Electrons by Neon. II. Theoretical Evaluation of the Effect of Spin-Polarization, *J. Phys. Soc. Jpn.* **39**, 200-204 (1975).
- 6885 Stockdale, J. A. D., Pullen, B. P., and Carter, A. E., A Simple Method of Obtaining Excitation Functions in Digital Form:

- Application to Electron Impact Dissociative Ionization of CO_2 , *Int. J. Mass Spectrom. Ion Phys.* **17**, 241-247 (1975).
- 6886 Cosby, P. C., Bennett, R. A., Peterson, J. R., and Moseley, J. T., Photodissociation and Photodetachment of Molecular Negative Ions. II. Ions Formed in Oxygen, *J. Chem. Phys.* **63**, 1612-1620 (1975).
- 6887 Judge, D. L., and Lee, L. C., $\text{OCS}^+(\text{A}^2\Pi \rightarrow \text{X}^2\Pi)$ Fluorescence from Photoionization of OCS, *Int. J. Mass Spectrom. Ion Phys.* **17**, 329-333 (1975).
- 6888 Kaiser, H. J., Heinicke, E., Rackwitz, R., and Feldmann, D., Photodetachment Measurements of Alkali Negative Ions, *Z. Phys. A* **270**, 259-265 (1974).
- 6889 Chang, J.-J., and Kelly, H. P., Photoabsorption of the Neutral Sodium Atom: A Many-Body Calculation, *Phys. Rev. A* **12**, 92-98 (1975).
- 6890 Msezane, A., and Manson, S. T., New Minima in Photoionization Cross Section, *Phys. Rev. Lett.* **35**, 364-366 (1975).
- 6901 John, T. L., The Continuous Absorption Coefficient of Atomic and Molecular Negative Ions, *Mon. Not. R. Astron. Soc.* **172**, 305-311 (1975).
- 6906 Mathur, D., and Hasted, J. B., Electron Scattering by Water and Alcohol Molecules, *Chem. Phys. Lett.* **34**, 90-91 (1975).
- 6907 Roy, D., Delage, A., and Carette, J.-D., Resonances in the Differential Excitation Functions of Five Electronic States of Ne in the Autoionization Region, *Phys. Rev. A* **12**, 45-51 (1975).
- 6939 Doyle, H., Oppenheimer, M., and Dalgarno, A., Bound-State Expansion Method for Calculating Resonance and Nonresonance Contributions to Continuum Processes: Theoretical Development and Application to the Photoionization of Helium and the Hydrogen Negative Ion, *Phys. Rev. A* **11**, 909-915 (1975).
- 6944 Dillon, M. A., Electron Impact Excitation of the $1^1\text{S} \rightarrow 2^3\text{S}$ Transition in Helium: Differential Cross-Section Determinations at High Incident Kinetic Energies, *J. Chem. Phys.* **63**, 2035-2040 (1975).
- 6945 Ziesel, J. P., Nenner, I., and Schulz, G. J., Negative Ion Formation, Vibrational Excitation, and Transmission Spectroscopy in Hydrogen Halides, *J. Chem. Phys.* **63**, 1943-1949 (1975).
- 6946 Fink, M., Jost, K., and Herrmann, D., Differential Cross Sections for Elastic Electron Scattering. III. The C_2H_2 , C_2H_4 , and C_2H_6 Results, *J. Chem. Phys.* **63**, 1985-1987 (1975).
- 6951 Srivastava, S. K., Chutjian, A., and Trajmar, S., Absolute Elastic Differential Electron Scattering Cross Sections in the Intermediate Energy Region. I. H_2 , *J. Chem. Phys.* **63**, 2659-2665 (1975).
- 6952 Williams, J. F., and Willis, B. A., Electron Scattering from Atomic Hydrogen. I. Differential Cross Sections for Excitation of the $n = 2$ States, *J. Phys. B* **8**, 1641-1669 (1975).
- 6953 Williams, J. F., Electron Scattering from Atomic Hydrogen. III. Absolute Differential Cross Sections for Elastic Scattering of Electrons of Energies from 20 to 680 eV, *J. Phys. B* **8**, 2191-2199 (1975).
- 6954 Callaway, J., McDowell, M. R. C., and Morgan, L. A., Scattering of Electrons by Hydrogen Atoms at Intermediate Energies: Total and Differential Cross Sections for Excitation of $n = 2$ States, *J. Phys. B* **8**, 2181-2190 (1975).
- 6955 Williams, J. F., and Crowe, A., The Scattering of Electrons from Inert Gases. II. Absolute Differential Elastic Cross Sections for Neon, Krypton, and Xenon Atoms, *J. Phys. B* **8**, 2233-2248 (1975).
- 6956 Kurepa, M. V., and Vuskovic, L., Differential Cross Sections of 100, 150 and 200 eV Electrons Elastically Scattered in Helium, *J. Phys. B* **8**, 2067-2078 (1975).
- 6957 Ray, S., and Barua, A. K., Rotational Excitation of HD^+ by Electron and Positron Impact, *J. Phys. B* **8**, 2283-2292 (1975).
- 6958 Joachain, C. J., Winters, K. H., and Byron Jr., F. W., Elastic Scattering of Fast Electrons and Positrons by Argon, *J. Phys. B* **8**, L289-L292 (1975).
- 6988 Nesbet, R. K., Variational Calculations of Electron Impact Excitation of He near the 2^3S and 2^1S Thresholds, *Phys. Rev. A* **12**, 444-450 (1975).
- 6989 Chu, S.-I., Rotational Excitation of Symmetric-Top Molecular Ions by Electron Impact, *Phys. Rev. A* **12**, 396-405 (1975).
- 6990 Bhattacharyya, P. K., and Ghosh, A. S., Elastic Scattering of Electrons by Hydrogen Molecules Using the Eikonal Approximation, *Phys. Rev. A* **12**, 480-485 (1975).
- 6991 Lin, C. D., Ground State and Elastic Phase Shift of the Electron-Hydrogen System Studied in Hyperspherical Coordinates, *Phys. Rev. A* **12**, 493-497 (1975).
- 6992 Eminyan, M., MacAdam, K. B., Slevin, J., Standage, M. C., and Kleinpoppen, H., Electron-Photon Angular Correlations in Electron-Helium Collisions for 3^1P Excitations, *J. Phys. B* **8**, 2058-2066 (1975).
- 6993 Hall, R. I., and Trajmar, S., Scattering of 4.5 eV Electrons by Ground ($^3\Sigma_g^-$) State and Metastable ($^1\Delta_g$) Oxygen Molecules, *J. Phys. B* **8**, L293-L296 (1975).
- 6994 Postoi, E. N., Aleksakhin, I. S., and Ivanchov, P. G., Electron Impact Excitation of Potassium and Cesium Atoms Into Ionic States, *Opt. Spectrosc. (USSR)* **38**, 263-265 (1975).
- 6995 Stauffer, A. D., and Morgan, L. A., A Generalization of the Coulomb-Projected Born Approximation, *J. Phys. B* **8**, 2172-2180 (1975).
- 6996 Gregory, D., and Fink, M., Scattering Factors for Low-Energy Electrons on Lithium, *J. Phys. B* **8**, L310-L313 (1975).
- 6997 Sukumar, C. V., Lin, S. L., and Bardsley, J. N., Regge Poles and the Watson-Sommerfeld Transformation in Low-Energy Atomic Collisions, *J. Phys. B* **8**, 577-587 (1975).
- 6998 Byron Jr., F. W., and Joachain, C. J., Electron Impact Excitation of the 2^1S State of Helium at Intermediate and High Energies, *J. Phys. B* **8**, L284-L288 (1975).
- 6999 Rescigno, T. N., and McKoy, V., Rigorous Method for Computing Photoabsorption Cross Sections from a Basis-Set Expansion, *Phys. Rev. A* **12**, 522-525 (1975).
- 7000 Ajmera, M. P., and Chung, K. T., Photodetachment of Negative Hydrogen Ions, *Phys. Rev. A* **12**, 475-479 (1975).
- 7001 Ford, A. L., Docken, K. K., and Dalgarno, A., Cross Sections for Photoionization of Vibrationally Excited Molecular Hydrogen, *Astrophys. J.* **200**, 788-789 (1975).
- 7002 Van Der Wiel, M. J., and Wight, G. R., Single Photoionization of Kr and Xe near the Outer d-Subshell Threshold, *Phys. Lett. A* **54**, 83-84 (1975).
- 7022 Chapman Jr., F. M., Molecular Photoionization. I. Development of a Computational Method, *J. Chem. Phys.* **63**, 2101-2108 (1975).
- 7023 Schnell, W., and Fischer, G., Carbon Dioxide Laser Absorption Coefficients of Various Air Pollutants, *Appl. Opt.* **14**, 2058-2059 (1975).
- 7024 Dose, V., Schmocker, U., and Sele, G., Der Photoabsorptionskoeffizient von Molekularem Sauerstoff für Strahlung in der Umgebung der Lyman-Alpha-Linie des Wasserstoffs, *Z. Phys. A* **274**, 1-8 (1975).
- 7025 Lott III, D. E., Glick, R. E., and Llewellyn, J. A., Helium Emission Spectra—I. Intermediate Pressure Studies, *J. Quant. Spectrosc. Radiat. Transfer* **15**, 513-526 (1975).
- 7026 Riley, M. E., and Truhlar, D. G., Approximations for the Exchange Potential in Electron Scattering, *J. Chem. Phys.* **63**, 2182-2191 (1975).
- 7027 Ross, K. J., and Ottley, T. W., Ejected Electron Spectrum of Rubidium Autoionizing Levels Obtained by Electron Impact Excitation, *Phys. Lett. A* **54**, 57-58 (1975).

- 7028 Ishihara, T., and Chen, J. C. Y., Two-Potential Eikonal Approximation for Electron-Atom Collisions, *Phys. Rev. A* **12**, 370-374 (1975).
- 7029 Azria, R., Wong, S. F., and Schulz, G. J., Vibrational Excitation in N_2O via the 2.3-eV Shape Resonance, *Phys. Rev. A* **11**, 1309-1313 (1975).
- 7030 Karstensen, F., and Schneider, M., Ionization Function of Magnesium for Electron Impact, *Z. Phys. A* **273**, 321-323 (1975).
- 7031 Choudhury, B. J., and Bhakar, B. S., Elastic Scattering of Electrons by Hydrogen Atom in a Laser Field, *Phys. Lett. A* **51**, 479-480 (1975).
- 7046 Hafidh, Z. A., and Hartnagel, H. L., Effect of Excessive-Trapping Operation of Sequential Mass Spectrometers Shown for Collision Cross-Section Data of BCl_3 , *J. Vac. Sci. Technol.* **12**, 1067-1071 (1975).
- 7047 Harland, P. W., and Franklin, J. L., Partitioning of Excess Energy in Dissociative Resonance Capture Processes, *J. Chem. Phys.* **61**, 1621-1636 (1974).
- 7048 Raoul, D., and Leycuras, Y., Oscillations de Relaxation dans la Decharge Luminescente dans l'Argon. Coefficient de Recombinaison Electron-Ion, *C. R. Acad. Sci. Ser. B* **280**, 365-367 (1975).
- 7049 Hirsch, R. G., Van Brunt, R. J., and Whitehead, W. D., Time-of-Flight Mass Spectrometric Technique for Measuring Dissociative Life-Times of Metastable Molecular Ions— CO^{2+} , *Int. J. Mass Spectrom. Ion Phys.* **17**, 335-349 (1975).
- 7051 Ennsberg, E. S., and Jefferts, K. B., The Visible Photodissociation Spectrum of Ionized Methane, *Astrophys. J.* **195**, L89-L91 (1975).
- 7052 Stockbauer, R., and Inghram, M. G., Threshold Photoelectron-Photoion Coincidence Mass Spectrometric Study of Ethylene and Ethylene-d, *J. Chem. Phys.* **62**, 4862-4870 (1975).
- 7053 Scheps, R., Ottinger, C., York, G., and Gallagher, A., Continuum Spectra and Potentials of Li-Noble Gas Molecules, *J. Chem. Phys.* **63**, 2581-2590 (1975).
- 7054 Yamashita, I., Crossed-Beam Experiment on Rotational Population Distribution of $\text{OH}(\text{A}^2\Sigma^+)$ Split from H_2O by Lyman Alpha Photon Impact, *J. Phys. Soc. Jpn.* **39**, 205-212 (1975).
- 7055 Aubert, D., Baldy, A., Baulaigue, P., and Chantrel, H., Photoexcitation et Pompage Optique dans un Jet Atomique de Baryum, *Rev. Phys. Appl.* **10**, 187-194 (1975).
- 7056 Huebner, R. H., Bushnell Jr., D. L., Celotta, R. J., Mielczarek, S. R., and Kuyatt, C. E., Ultraviolet Photoabsorption by Halocarbons 11 and 12 from Electron Impact Measurements, *Nature (London)* **257**, 376-378 (1975).
- 7076 King, G. C., Read, F. H., and Bradford, R. C., Structure near Autoionizing Energies in the Excitation of Bound States of Helium, Neon, and Argon by Electron Impact, *J. Phys. B* **8**, 2210-2224 (1975).
- 7077 Duguet, A., and Jaegle, A., Electron Scattering Differential Cross Sections for C_2H_2 , C_2H_4 , and C_2H_6 by Gas Phase Electron Diffraction—Binding Effects, *Chem. Phys. Lett.* **33**, 436-440 (1975).
- 7078 Cravens, T. E., Victor, G. A., and Dalgarno, A., The Absorption of Energetic Electrons by Molecular Hydrogen Gas, *Planet. Space Sci.* **23**, 1059-1070 (1975).
- 7079 Barden, I. R., Botcher, C., and Schneider, K. R., Model Potential Calculations of Resonance States in Three-Electron Atoms, *J. Phys. B* **8**, L1-L4 (1975).
- 7080 Smith, E. R., The Effect of Configuration-Interaction Target States on the Elastic Scattering of Low-Energy Electrons by Complex Atoms, *J. Phys. B* **8**, 2200-2209 (1975).
- 7081 Ellefson, R. E., Osterlitz, B. A., Phillips, J. M., Denison, A. B., and Weber, J. H., Optically Modified Mass Spectra of CO_2 , *Chem. Phys. Lett.* **31**, 364-368 (1975).
- 7094 Van Brunt, R. J., and Kieffer, L. J., Angular Distribution of N^+ from Dissociative Ionization of N_2 near Threshold, *J. Chem. Phys.* **63**, 3216-3221 (1975).
- 7095 Van Brunt, R. J., and Mumma, M. J., Fast Metastable Fragments Produced by Dissociative Excitation of Carbonyl Sulfide, *J. Chem. Phys.* **63**, 3210-3215 (1975).
- 7096 Koura, K., Nonequilibrium Velocity Distributions and Recombination Rates in Electron-Ion and Ion-Ion Recombinations in Weakly Ionized Gases, *J. Chem. Phys.* **63**, 3302-3306 (1975).
- 7097 Ray, S., and Barua, A. K., Vibrational-Rotational Excitations of the $(\text{HeH})^+$ Ion by Collisions with Positrons, *Phys. Rev. A* **12**, 796-800 (1975).
- 7098 Lee, L. C., and Judge, D. L., $\text{CS}(\text{A}^1\Pi \rightarrow \text{X}^1\Sigma^+)$ Fluorescence from Photodissociation of CS_2 and OCS , *J. Chem. Phys.* **63**, 2782-2786 (1975).
- 7106 Band, Y. B., and Freed, K. F., Dissociation Processes of Polyatomic Molecules, *J. Chem. Phys.* **63**, 3382-3397 (1975).
- 7113 Mark, T. D., Cross Section for Single and Double Ionization of N_2 and O_2 Molecules by Electron Impact from Threshold up to 170 eV, *J. Chem. Phys.* **63**, 3731-3736 (1975).
- 7114 Imami, M., and Borst, W. L., Electron Impact Excitation of the Gamma Bands of Nitric Oxide, *J. Chem. Phys.* **63**, 3602-3605 (1975).
- 7115 Bonham, R. A., and Ng, E. W., On the Calculation of Total Electron Inelastic Scattering Cross Sections for Neutral Atoms in the keV Energy Range, *Chem. Phys. Lett.* **4**, 355-357 (1969).
- 7116 Chung, S., Lin, C. C., and Lee, E. T. P., Dissociation of the Hydrogen Molecule by Electron Impact, *Phys. Rev. A* **12**, 1340-1349 (1975).
- 7117 Fink, M., Jost, K., and Herrmann, D., Differential Cross Sections for Elastic Electron Scattering. Charge-Cloud Polarization in H_2 , *Phys. Rev. A* **12**, 1374-1382 (1975).
- 7118 Chan, F. T., and Chang, C. H., Cross Sections for Excitation of the $n^1\text{D}$ States of Helium by Electron Impact and Polarization of the Resulting Radiation in Glauber Theory, *Phys. Rev. A* **12**, 1383-1392 (1975).
- 7119 Srivastava, S. K., Hall, R. I., Trajmar, S., and Chutjian, A., Pure Rotational Excitation of H_2 at Electron Impact Energies of 3 to 100 eV, *Phys. Rev. A* **12**, 1399-1401 (1975).
- 7120 Winters, H. F., Dissociation of Methane by Electron Impact, *J. Chem. Phys.* **63**, 3462-3466 (1975).
- 7122 Smith, E. R., A Numerical Approach to the Solution of Coupled Equations Involved in Electron-Ion and Electron-Atom Scattering Problems, *J. Comput. Phys.* **18**, 201-223 (1975).
- 7123 Stockdale, J. A. D., Anderson, V. E., Carter, A. E., and Deleanu, L., Dissociative Ionization of Molecules by Electron Impact. I. Apparatus and Kinetic Energy Distributions of D^+ Ions from D_2 , *J. Chem. Phys.* **63**, 3886-3897 (1975).
- 7124 Deleanu, L., and Stockdale, J. A. D., Dissociative Ionization of Molecules by Electron Impact. II. Kinetic Energy and Angular Distributions of N^+ and N^{++} Ions from N_2 , *J. Chem. Phys.* **63**, 3898-3906 (1975).
- 7125 Kumar, S., and Srivastava, M. K., Elastic Scattering of Electrons from Lithium Atoms in the Glauber Approximation, *Phys. Rev. A* **12**, 801-805 (1975).
- 7126 Flannery, M. R., and McCann, K. J., Ten-Channel Eikonal Treatment of Electron-Metastable-Helium Collisions: Differential and Integral Cross Sections for $2^{1,3}\text{P}$ and $n = 3$ Excitations from $\text{He}(2^{1,3}\text{S})$ and the (λ, χ, I) Parameters, *Phys. Rev. A* **12**, 846-855 (1975).

- 7127 Milhaud, J., On the Formation of CH_4^+ , CH_3^+ , CH_2^+ , CH^+ and C^+ Secondary Ions in Methane, *Int. J. Mass Spectrom. Ion Phys.* **16**, 327-337 (1975).
- 7128 Shimon, L. L., Nepiykov, E. I., and Zapesochnyi, I. P., Electron Impact Excitation of Aluminum Atoms, *Ukr. Fiz. Zh. Ukr. Ed.* **20**, 229-232 (1975).
- 7129 Shimon, L. L., Nepiykov, E. I., Golodovsky, V. L., and Golovchak, N. V., Electron Impact Effective Excitation Cross-Sections for Gallium, *Ukr. Fiz. Zh. Ukr. Ed.* **20**, 233-237 (1975).
- 7130 Miyazaki, K., Watanabe, T., and Fukuda, K., Absorption Cross Sections for the Autoionizing Transitions $5s5p\ ^3\text{P}_{1/2} \rightarrow 5p^2\ ^3\text{P}_2$ of CdI, *J. Phys. Soc. Jpn.* **38**, 1551 (1975).
- 7131 Gardner, J. L., and Samson, J. A. R., Proton Kinetic-Energy Distributions from Dissociative Photoionization of Hydrogen, *Phys. Rev. A* **12**, 1404-1407 (1975).
- 7133 Chang, T. N., and Poe, R. T., Double Photoionization of Neon, *Phys. Rev. A* **12**, 1432-1439 (1975).
- 7134 Lee, L. C., Carlson, R. W., Judge, D. L., and Ogawa, M., Vacuum Ultraviolet Fluorescence from Photodissociation Fragments of CO and CO_2 , *J. Chem. Phys.* **63**, 3987-3995 (1975).
- 7135 Pindzola, M. S., and Kelly, H. P., Comparison of the Acceleration, Length, and Velocity Forms of the Dipole Operator in Photoionization Calculations, *Phys. Rev. A* **12**, 1419-1424 (1975).
- 7136 Samson, J. A. R., Gardner, J. L., and Starace, A. F., $^2\text{P}_{3/2}\text{-}^2\text{P}_{1/2}$ Partial Photoionization Cross-Section Ratios in the Rare Gases, *Phys. Rev. A* **12**, 1459-1463 (1975).
- 7137 Nygaard, K. J., Hebner Jr., R. E., Jones, J. D., and Corbin, R. J., Photoionization of the $6^3\text{P}_{3/2,1/2}$ Fine-Structure Levels in Cesium, *Phys. Rev. A* **12**, 1440-1447 (1975).
- 7145 Narain, U., and Jain, N. K., Electron Detachment Cross Sections of Negative Alkali Ions, *Can. J. Phys.* **53**, 1221-1223 (1975).
- 7146 Tsurubuchi, S., and Isaka, S., Excitation Function for Lyman- α Emission in Electron-Impact of H_2O , *J. Phys. Soc. Jpn.* **38**, 1224 (1975).
- 7147 Bennani, A. L., Nguyen, B., Pebay, J., and Lecas, M., An Apparatus to Measure Precise Total Differential Cross Sections of Electrons Scattered by Gases Employing an Electron Counting System, *J. Phys. E* **8**, 651-655 (1975).
- 7148 Center, R. E., and Chen, H.-L., Vibrational Excitation of HCl by Electron Impact, *IEEE J. Quantum Electron.* **11**, 687 (1975).
- 7238 Inokuti, M., Saxon, R. P., and Dehmer, J. L., Total Cross-Sections for Inelastic Scattering of Charged Particles by Atoms and Molecules—VIII. Systematics for Atoms in the First and Second Row, *Int. J. Radiat. Phys. Chem.* **7**, 109-120 (1975).
- 7239 Baille, P., and Darewych, J. W., Collisions Entre un Positron et une Molecule d'Hydrogene avec Excitation de Vibrations, *J. Phys. (Paris) Lett.* **35**, L243-L245 (1974).
- 7263 Yeager, D. L., Nascimento, M. A. C., and McKoy, V., Some Applications of Excited-State—Excited-State Transition Densities, *Phys. Rev. A* **11**, 1168-1174 (1975).
- 7269 Bell, K. L., and Kingston, A. E., The Angular and Energy Distributions of Electrons Ejected in the Ionization of Helium Atoms by Protons and Electrons, *J. Phys. B* **8**, 2666-2678 (1975).
- 7270 Dickinson, A. S., and Richards, D., The Rotational Excitation of Polar Molecules by Electrons, *J. Phys. B* **8**, 2846-2857 (1975).
- 7271 Chutjian, A., and Srivastava, S. K., Experimental-Theoretical Comparisons of $1^1\text{S} \rightarrow 2^1\text{P}$ Differential Magnetic Sublevel Cross Sections for Electron-Helium Scattering at 60 eV and 80 eV, *J. Phys. B* **8**, 2360-2368 (1975).
- 7272 Shimon, L. L., Nepiykov, E. I., and Zapesochnyi, I. P., Effective Total Electron-Impact Ionization Cross Sections for Aluminum, Gallium, Indium, and Thallium, *Sov. Phys. Tech. Phys.* **20**, 434 (1975).
- 7273 Coleman, P. G., Griffith, T. C., Heyland, G. R., and Killeen, T. L., A Method for the Investigation of the Inelastic Scattering of Positrons by Helium, *J. Phys. B* **8**, L454-L457 (1975).
- 7274 Mandal, P., Saha, B. C., and Sil, N. C., Positron-Hydrogen Scattering by the Faddeev Approach, *J. Chem. Phys.* **63**, 4767-4771 (1975).
- 7275 Gillespie, E. S., and Thompson, D. G., Positron Scattering by Molecular Nitrogen, *J. Phys. B* **8**, 2858-2868 (1975).
- 7276 Burke, P. G., and Taylor, K. T., R-Matrix Theory of Photoionization. Application to Neon and Argon, *J. Phys. B* **8**, 2620-2639 (1975).
- 7277 Le Dourneuf, M., Lan, V. K., Burke, P. G., and Taylor, K. T., The Photoionization of Neutral Aluminium, *J. Phys. B* **8**, 2640-2653 (1975).
- 7304 Hertz, H., VUV Emission of Xe III Levels Excited by Electron Impact via $\text{N}_{1,5}\text{OO}$ Auger Transitions, *Z. Phys. A* **274**, 289-291 (1975).
- 7305 Loch, R., and Durer, J. M., New Predissociations of CO and CO^+ Induced by Low Energy Electron Impact, *Chem. Phys. Lett.* **34**, 508-512 (1975).
- 7306 Smalley, R. E., Wharton, L., and Levy, D. H., The Fluorescence Excitation Spectrum of Rotationally Cooled NO_2 , *J. Chem. Phys.* **63**, 4977-4989 (1975).
- 7307 Halpern, J. B., Hancock, G., Lenzi, M., and Welge, K. H., Laser Induced Fluorescence from $\text{NH}_2(^2\text{A}_1)$ State Selected Radiative Lifetimes and Collisional De-Excitation Rates, *J. Chem. Phys.* **63**, 4808-4818 (1975).
- 7308 Van Asselt, N. P. F. B., Maas, J. G., and Los, J., Laser-Induced Photodissociation of HD^+ Ions, *Chem. Phys.* **11**, 253-257 (1975).
- 7309 Tiwari, P., Hashim, M. A., and Ojha, S. P., Photoionization of Li and Its Isoelectric Sequence from an Independent Particle Model, *Can. J. Phys.* **53**, 1524-1527 (1975).
- 7310 Chatterji, M., and Talukdar, B., Many-Body Theory for Simultaneous Photoionization and Photoexcitation of Helium, *Phys. Lett. A* **55**, 143-145 (1975).
- 7311 Band, Y. B., and Freed, K. F., Large Isotope Effects in Photodissociation of Polyatomic Molecules, *J. Chem. Phys.* **63**, 4479-4484 (1975).
- 7348 Barfield, W. D., and Huebner, W. F., On the Calculation of Scattering Cross Sections from Absorption Cross Sections, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 27-34 (1976).
- 7349 Lum, R. M., and McAfee Jr., K. B., Direct Measurement of Spontaneous Predissociation Using Coaxial Laser-Molecular Beams, *J. Chem. Phys.* **63**, 5029-5033 (1975).
- 7351 Reed, K. J., and Brauman, J. I., Photodetachment of Electrons from Group IVa Binary Hydride Anions: The Electron Affinities of the SiH_3 and GeH_3 Radicals, *J. Chem. Phys.* **61**, 4830-4838 (1974).
- 7352 Samson, J. A. R., and Gardner, J. L., Partial Photoionization Cross-Sections and Branching Ratios of CO from 750 to 304 Å, *J. Electron Spectrosc. Relat. Phenom.* **8**, 35-44 (1976).
- 7377 Korol, V. I., and Kishko, S. M., Dissociative Excitation of HCN by Slow Electrons in the 280-700-nm Region, *Opt. Spectrosc. (USSR)* **38**, 486-487 (1975).
- 7378 Tsung, P. N., Electrons Scattered from Helium Below 5.0 eV, *Physica (Utrecht) C* **79**, 520-528 (1975).
- 7379 Syzlik, P. P., Kutcher, G. J., and Green, A. E. S., Independent-Particle-Model Study of the Elastic Scattering of Low-Energy Electrons by Positive Ions, *Phys. Rev. A* **10**, 1623-1632 (1974).

- 7380 Kurepa, M. V., Cadez, I. M., and Pejcev, V. M., Absolute Measurements of the Electron-Argon Atom Total Ionization Cross Section, *Fizika (Zagreb)* **6**, 185-209 (1974).
- 7381 Finn, T. G., and Doering, J. P., Elastic Scattering of 13 to 100 eV Electrons from N_2 , *J. Chem. Phys.* **63**, 4399-4404 (1975).
- 7382 Blum, K., and Burke, P. G., Phaseshifts and Differential Cross Sections for Elastic Electron-Neon Scattering, *J. Phys. B* **8**, L410-L413 (1975).
- 7383 Callaway, J., and Williams, J. F., Scattering of Electrons by Hydrogen Atoms at Intermediate Energies: Elastic Differential Cross Sections from 10 to 30 eV, *Phys. Rev. A* **12**, 2312-2318 (1975).
- 7384 Blaha, M., and Davis, J., Elastic Scattering of Electrons by Oxygen and Nitrogen at Intermediate Energies, *Phys. Rev. A* **12**, 2319-2324 (1975).
- 7385 Thomas, L. D., and Nesbet, R. K., Low-Energy Electron Scattering by Atomic Carbon, *Phys. Rev. A* **12**, 2378-2382 (1975).
- 7386 Madan, R. N., Eikonal Exchange Amplitudes and the Inclusion of Exchange in Elastic (eH) Scattering, *Phys. Rev. A* **12**, 2631-2634 (1975).
- 7387 Baltayan, P., and Nedelec, O., Excitation of the $3p\ ^3H_u$ Level of H_2 by Electron Impact: Pressure Effects, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 207-211 (1976).
- 7388 Herrmann, D., Jost, K., Kessler, J., and Fink, M., Differential Cross Sections for Elastic Electron Scattering. II. Charge Cloud Polarization in N_2 , *J. Chem. Phys.* **64**, 1-5 (1976).
- 7389 Jhanwar, B. L., and Khare, S. P., Elastic Scattering of Electrons by Helium and Hydrogen Atoms at Intermediate Energies, *J. Phys. B* **8**, 2659-2665 (1975).
- 7390 Taylor, I. R., High Energy Elastic Scattering of Electrons from the 2^1S and 2^3S States of Helium, *J. Phys. B* **8**, 2810-2816 (1975).
- 7391 Syms, R. F., McDowell, M. R. C., Morgan, L. A., and Myerscough, V. P., Electron Impact Excitation of H and He^+ . VI. Excitation of the $n = 3$ Levels, *J. Phys. B* **8**, 2817-2834 (1975).
- 7392 Ishihara, T., and Chen, J. C. Y., Eikonal Approximation for the Scattering of Charged Particles by Ions, *J. Phys. B* **8**, L417-L420 (1975).
- 7393 Hata, J., Many-Body Perturbation Approach to Resonance Scattering Problem, *Phys. Lett. A* **55**, 19-21 (1975).
- 7394 Samoilov, V. P., Smirnov, Yu. M., and Starikova, G. S., Transition Probabilities and Cross Sections for Excitation of Xe II, *Opt. Spectrosc. (USSR)* **38**, 707-708 (1975).
- 7395 Kelman, V. A., and Imre, A. I., Absolute Cross Section for Excitation of a Ca^+ Ion Resonance Level by Electron Impact, *Opt. Spectrosc. (USSR)* **38**, 709-710 (1975).
- 7396 Rescigno, T. N., McCurdy Jr., C. W., and McKoy, V., *Ab initio* Cross Sections for the Excitation of the $b^3\Sigma_u^+$ State of H_2 by Electron Impact in the Distorted-Wave Approximation, *J. Phys. B* **8**, L433-L436 (1975).
- 7397 Rescigno, T. N., McCurdy Jr., C. W., McKoy, V., and Bender, C. F., Low-Energy Electron-Impact Excitation of the Hydrogen Molecule, *Phys. Rev. A* **13**, 216-223 (1976).
- 7398 Divine, T. F., Feeney, R. K., Sayle II, W. E., and Hooper, J. W., Absolute Experimental Cross Section for the Ionization of Tl^+ Ions by Electron Impact, *Phys. Rev. A* **13**, 54-57 (1976).
- 7399 Smith, E. R., Electron-Impact Excitation of Atomic Oxygen, *Phys. Rev. A* **13**, 65-73 (1976).
- 7400 Presnyakov, L. P., and Urnov, A. M., Excitation of Multiply Charged Ions by Electron Impact, *Sov. Phys. JETP* **41**, 31-34 (1975).
- 7401 Pavlov, P. A., and Yakhontova, V. E., Effect of Radiation Diffusion on the Intensity of Lines Excited by an Electron Beam Passing through a Gas, *Opt. Spectrosc. (USSR)* **39**, 130-133 (1975).
- 7402 Feeney, R. K., Divine, T. F., Kovac, R. M., McPherson, D., and Sayle II, W. E., The Excitation and Ionization of Ions by Electron Impact, Technical Progress Report No. ORO-3027-30, U.S. Energy Research and Development Admin., Georgia Institute of Technology, Atlanta, Georgia, Contract No. AT-(40-1)-3027, 33 pages, (1975).
- 7403 Morgan, L. A., and Stauffer, A. D., Orientation and Alignment Parameters for the $2p$ State of H in the Coulomb-Projected Born Approximation, *J. Phys. B* **8**, 2342-2346 (1975).
- 7404 Scott, T., and McDowell, M. R. C., Electron Impact Excitation of $He(n^1S)$, ($n = 4,5$) at Intermediate Energies, *J. Phys. B* **8**, 2369-2376 (1975).
- 7405 King, G. C., Bradford, R. C., and Read, F. H., Excitation Cross Sections of the $n = 3$ States of Helium at Incident Electron Energies near Autoionizing Levels, *J. Phys. B* **8**, L477-L479 (1975).
- 7406 Mandal, P., Ghosh, A. S., and Sil, N. C., e^+-He Scattering Using an Integral Form of the Close-Coupling Approximation, *J. Phys. B* **8**, 2377-2389 (1975).
- 7407 Lang, J., and Watson, W. S., The Photoabsorption Coefficients of Krypton and Xenon from 48 Å to 210 Å, *J. Phys. B* **8**, L339-L343 (1975).
- 7408 Carter, S. L., and Kelly, H. P., Photoionization Cross Section of the ^1P Ground State of Neutral Carbon, *J. Phys. B* **8**, L467-L471 (1975).
- 7409 Roig, R. A., The Photoionization Spectrum of Neutral Aluminium, Al I, *J. Phys. B* **8**, 2939-2947 (1975).
- 7416 Dashchenko, A. I., Zapesochnyi, I. P., Imre, A. I., and Kelman, V. A., Polarization and Effective Excitation Cross Sections for Resonant Radiation from Sr^+ Ions Subject to Electron Impact, *Ukr. Fiz. Zh. Ukr. Ed.* **20**, 1214-1216 (1975).
- 7417 Weatherford, C. A., Frame Transformations in Electron-Molecule Scattering, Thesis, Louisiana State University, Baton Rouge, Louisiana, 114 pages, University Microfilms Inc., Ann Arbor, Michigan, No. 75-1962 (1974).
- 7418 Tamba, B. R., Electron Impact Induced Fine Structure Transitions in Atomic Oxygen, Thesis, Louisiana State University, Baton Rouge, Louisiana, 87 pages, University Microfilms Inc., Ann Arbor, Michigan, NO. 75-1955 (1974).
- 7419 Thomas, L. D., and Nesbet, R. K., Low-Energy Electron Scattering by Atomic Nitrogen, *Phys. Rev. A* **12**, 2369-2377 (1975).
- 7420 Spence, D., Cross Sections and Threshold Effects for Electron-Impact Excitation of the $(2s^2)^1S$ and $(2s2p)^1P$ States of Helium, *Phys. Rev. A* **12**, 2353-2360 (1975).
- 7421 Chandra, N., Low Energy Electron Scattering from CO, *Phys. Rev. A* **12**, 2342-2352 (1975).
- 7422 Marmet, P., Bolduc, E., and Quemener, J. J., Excitation de l'Argon par Impact Electronique Entre 43 et 60 eV, *Can. J. Phys.* **53**, 2438-2444 (1975).
- 7423 Lins De Barros, H. G. P., and Brandi, H. S., Electron Excitation of 2^1S , 2^3S , 2^1P , and 2^3P States of Helium, *Can. J. Phys.* **53**, 2289-2295 (1975).
- 7424 Smyth, K. C., Schiavone, J. A., and Freund, R. S., Optical Emission Spectra Produced by Electron Impact Excitation of Benzene, *J. Chem. Phys.* **61**, 4747-4749 (1974).
- 7425 Doolen, G. D., Nuttall, J., and Stagat, R. W., Electron-Hydrogen Resonance Calculation by the Coordinate-Rotation Method, *Phys. Rev. A* **10**, 1612-1615 (1974).
- 7426 Lee, L. C., Carlson, R. W., and Judge, D. L., Photoabsorption Cross Sections of CO from $\lambda\lambda 520-730$ Å, *Mol. Phys.* **30**,

- 1941-1943 (1975).
- 7431 Copley, G. H., and Lee, C. S., Electron Excitation and Deexcitation Coefficients for the $^3P_2$, $^3P_1$, $^1P_1$, and $^1P_1$ Levels of Argon, *Can. J. Phys.* **53**, 1705-1714 (1975).
- 7432 Belenov, E. M., Isakov, V. A., Oraevskii, A. N., and Romanenko, V. I., Dissociation of Fluorine Molecules by Electron Impact, *Sov. J. Quantum Electron.* **4**, 758-760 (1974).
- 7433 Tokue, I., and Kuchitsu, K., Formation of $CN(B^2\Sigma)$ by the Electron Impact Dissociation of Cyanides. Rotational Perturbation, *Chem. Phys. Lett.* **36**, 207-210 (1975).
- 7434 Du Bois, R. D., and Rudd, M. E., Secondary Electron Production by Electron Impact, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 479-480 (1975).
- 7435 Tancic, A. R., Amusia, M. Ya., Cherepkov, N. K., and Shapiro, S. G., Elastic Scattering of Slow Electrons on the Atoms with Many-Electron Correlations, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 465-466 (1975).
- 7436 Joachain, C. J., Vanderpoorten, R., Winters, K. H., and Byron Jr., F. W., Elastic Scattering of Electrons and Positrons by Complex Atoms at Intermediate and High Energies, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 463-464 (1975).
- 7437 Du Bois, R. D., and Rudd, M. E., Small Angle Elastic Scattering for Electrons with Ar and N_2 , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 453-454 (1975).
- 7438 Crowe, A., and Williams, J. F., Absolute Differential Cross Sections for the Elastic Scattering of Electrons from Neon, Krypton, and Xenon, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 451-452 (1975).
- 7439 Weisheit, J. C., Dielectronic Recombination and Satellite X-Ray Line Intensities in Laser-Produced Plasmas, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 404-405 (1975).
- 7440 Trnovec, J., and Lukac, P., Effective Electron-Ion Recombination Coefficient in Argon and Argon-Helium Mixtures, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 402-403 (1975).
- 7441 Drukarev, G. F., and Berezina, N. B., Backscattering of Slow Electrons on Positive Ions, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 400-401 (1975).
- 7442 Bhatia, A. K., Cooper, J. W., and Temkin, A., Comparison of Distorted Wave and Close-Coupling Results for Helium-Like Positive Ions, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 398-399 (1975).
- 7443 Robb, W. D., and Garstang, R. H., The Scattering of Low Energy Electrons by Fe III and Fe VI, with Astrophysical Applications, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 395-396 (1975).
- 7444 Zapesochnyi, I. P., Kelman, V. A., Imre, A. I., Dashchenko, A. I., and Rohulitch, V. S., Excitation of the Mg^+ and Sr^+ Ions in Electron-Ion Collisions, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 393-394 (1975).
- 7445 Taylor, P. O., Phaneuf, R. A., Crandall, D. H., and Dunn, G. H., Electron Impact Excitation of Positive Ions: Absolute Cross Sections, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 391-392 (1975).
- 7446 Caudano, R., Wilk, S. F. J., and McGowan, J. W., ($e-H_i^+$) Recombination Using Merged Electron-Ion Beam Techniques, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 389-390 (1975).
- 7447 Rohr, K., and Linder, F., Low-Energy Electron Scattering by Polar Molecules: Beam Experiments for the $e-HCl$ System, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 289-290 (1975).
- 7448 Herzenberg, A., and Dube, L., Resonant Electron-Molecule Scattering: The Impulse Approximation in N_2O , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 285-286 (1975).
- 7449 Stern, R. C., and Becker, W., Rotational Excitation of CsF by Low Energy Electrons, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 275-276 (1975).
- 7450 Reinhardt, J., Gresteau, F., Hall, R. I., Huetz, A., and Tronc, M., Electron Impact Excitation of Low-Lying Shape Resonances in NO, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of*

- Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 271-272 (1975).
- 7451 Donohue, D. E., and Stern, R. C., Low Energy Electron Time-of-Flight Spectroscopy, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 269-270 (1975).
- 7452 Srivastava, S. K., Trajmar, S., Chutjian, A., and Williams, W., Absolute Elastic Differential Electron Scattering Cross Sections in the 5 to 75 eV Energy Region for N_2 , SF_6 , and UF_6 , (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **1**, 265-266 (1975).
- 7453 Drukarev, G. F., and Yurova, I. Yu., The Vibrational Excitation of H_2 and Na_2 Molecules by Slow Electrons, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 262-263 (1975).
- 7454 Srivastava, S. K., Hall, R. I., Trajmar, S., and Chutjian, A., Pure Rotational Excitation of H_2 at Electron Impact Energies of 3 eV to 100 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 259-260 (1975).
- 7455 Sharp, J. M., Comer, J., and Hicks, P. J., Electron Impact Studies of Autoionizing States in Neon and Xenon, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 208-209 (1975).
- 7456 Carette, J.-D., Delage, A., and Roy, D., Resonances in the Differential Excitation Functions of Ne in the Autoionization Region, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 206-207 (1975).
- 7457 King, G. C., Read, F. H., Bradford, R. C., Smith, A. J., and Hicks, P. J., Structure near Autoionizing Energies in the Excitation of Bound States of Helium, Neon, and Argon by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 203 (1975).
- 7458 Westerveld, W. B., Heideman, H. G. M., Van Eck, J., and Goings, M., Post-Collision Interaction Structures in n^3P Excitation of He by Electrons, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 197-198 (1975).
- 7459 Spence, D., Threshold Effects in Electron-Impact Excitation of the $(2s^2)^1S$ and $(2s2p)^3P$ Autoionizing States of Helium, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 195-196 (1975).
- 7460 Koval, A. G., Koppe, V. T., and Danilevskii, N. P., The Study of Excitation of Some Hydrocarbon Molecules by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 139-140 (1975).
- 7461 Chutjian, A., Srivastava, S. K., and Trajmar, S., Elastic and Inelastic Electron-Impact Excitation of SF_6 at Incident Energies ≤ 20 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 137-138 (1975).
- 7462 Gerzanich, G. Yu., Skubenich, V. V., and Zapesochnyi, I. P., Electron Impact Excitation of Nitrous Oxide Molecules, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 132-133 (1975).
- 7463 Borst, W. L., and Imami, M., Absolute Cross Sections for the Excitation of the γ -Bands of Nitric Oxide by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 130-131 (1975).
- 7464 Hall, R. I., and Trajmar, S., Scattering of 4.5 eV Electrons by Ground ($X^3\Sigma_g^-$) State and Metastable ($a^1\Delta_g$) O_2 , (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 119-120 (1975).
- 7465 Peixoto, E. M. A., and Nogueira, J. C., Total Differential Cross Section for 500 eV and 1 keV Electrons Scattered by Nitrogen (N_2), (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 117-118 (1975).
- 7466 Eyb, M., Weingartshofer, A., and Clarke, E. M., Resonances and Their Effects Above and Below the Electron-Impact Ionization Threshold of D_2 , (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 109-110 (1975).
- 7467 Cherepkov, N. K., Amusia, M. Ya., Chernysheva, L. V., and Shapiro, S. G., The Elastic Scattering of Slow Positrons on He Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 155-156 (1975).
- 7468 Dutton, J., Brenton, A. G., Harris, F. M., and Jones, R. A., Total Cross-Sections for the Scattering of 50-400 eV Positrons by Helium and Neon, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the

- Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 153-154 (1975).
- 7469 Rozsnyai, B. F., Resonances in the Continuous Photoabsorption Cross Sections, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 385-386 (1975).
- 7470 Broad, J. T., and Reinhardt, W. P., L^2 Calculation of the H⁺ Photoabsorption Cross Section at Low and Intermediate Energies, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington 1, 381-382 (1975).
- 7471 Carlsten, J. L., Peterson, J. R., and Lineberger, W. C., Binding of an Electron by the Field of a Molecular Dipole—LiCl, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 379-380 (1975).
- 7472 Slater, J., and Lineberger, W. C., High Resolution Photodetachment Study of Te⁻ Ions, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 378 (1975).
- 7473 Watanabe, T., and Nishikawa, S., Dissociation of CH₃ and CD₃ Caused by Photoionization and Photoexcitation, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 18-19 (1975).
- 7474 Guyon, P. M., and Metall, J. E., Photodissociation of Molecular Hydrogen and Deuterium in the Region 850-750 Å Using Synchrotron Radiation, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 10-11 (1975).
- 7475 Miller, T. M., Heidrich, J. L., and Moseley, J. T., Photon and Collisional Dissociation of N₂⁺, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 7-8 (1975).
- 7476 Peterson, J. R., Cosby, P. C., Bennett, R. A., and Moseley, J. T., Photodissociation and Photodetachment of O₂⁺, O₃⁺, and O₃⁻, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 5-6 (1975).
- 7477 Moseley, J. T., Cosby, P. C., Heidrich, J. L., and Peterson, J. R., Photodissociation and Excited States of CO₃⁻ and CO₃·H₂O, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 3-4 (1975).
- 7493 Outley, T. W., and Ross, K. J., Autoionization Electron Spectra of Na, K and Rb Excited by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 2, 774-775 (1975).
- 7494 Ogurtsov, G. N., and Amusia, M. Ya., Influence of Many-Electron Correlations on Energy Spectra of Ejected Electrons, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 2, 769-770 (1975).
- 7495 Ogurtsov, G. N., Flaks, I. P., Mikoushkin, V. M., Shapiro, S. G., and Sheftel, S. I., Autoionization Transitions in Argon Excited by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 2, 767-768 (1975).
- 7496 Bolduc, E., and Marmet, P., Resonances in the Electron-Impact Excitation Cross Section of Metastable States of Helium and Neon, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 2, 765-766 (1975).
- 7497 Suzuki, H., Jimbo, Y., Takayanagi, T., and Wakiya, K., Resonance Shape in Electron Ejection Spectra in Autoionization of He by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington 2, 763-764 (1975).
- 7498 Shelton, W. N., Baluja, K. L., and Madison, D. H., Triple Differential Cross Sections for the Electron-Impact Ionization of Helium in the Distorted-Wave Approximation, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 488-489 (1975).
- 7499 Weigold, E., Ugbah, A., and Teubner, P. J. O., Measurement of the Triple Differential (e,2e) Cross Section for Autoionization from Helium, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 1, 486-487 (1975).
- 7500 Jain, D. K., and Khare, S. P., Electron Impact Ionization of Molecular Gases, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington 1, 484-485 (1975).
- 7501 Oda, N., and Nishimura, F., Double Differential Cross Sections for Ionizing Collisions of Electrons with CH₄, CO, and H₂O, (In) Electronic and Atomic Collisions: Abstracts of Papers

- of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 481-482 (1975).
- 7502 Guidoni, A. G., Camilloni, R., Stefani, G., Tiribelli, R., Vinciguerra, D., and Weigold, E., Momentum Distribution and Energy Spectra of Valence Electrons from (e,2e) Reactions in Noble Gases and Simple Molecules, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 490-491 (1975).
- 7503 Ashihara, O., The Electron Energy Loss Rates by Polar Molecules, ISAS Report No. 530, Institute of Space and Aeronautical Science, University of Tokyo, Tokyo, Japan, 18 pages (1975).
- 7504 De Jongh, J. P., Electron Excitation of Noble Gas Atoms Measured by Vacuum Ultraviolet Spectrometry, Thesis, Rijksuniversiteit Utrecht, Utrecht, The Netherlands, 99 pages, (1971).
- 7505 Mandelbaum, D., Infrared Emission Spectra of N_2 and N_2^+ by Electron Impact Excitation, Thesis, The Johns Hopkins University, Baltimore, Maryland, 122 pages, University Microfilms Inc., Ann Arbor, Michigan, No. 74-29014 (1974).
- 7506 Tancic, A. R., Amusia, M. Ya., Cherepkov, N. K., and Shapiro, S. G., Inelastic Scattering of Slow Electrons on the Ar Atom, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 645-646 (1975).
- 7507 Julienne, P. S., and Davis, J., Cascade and Radiation Trapping Effects on the Emission Cross Sections of $O\ 1\ 3s^4S$ and $3s^5S$, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 640-641 (1975).
- 7508 Thomas, L. D., and Nesbet, R. K., Low Energy Electron Scattering by C and N Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 637-638 (1975).
- 7509 Le Dourneuf, M., Lan, V. K., Berrington, K. A., and Burke, P. G., Electron Scattering by C, N and O Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 634-635 (1975).
- 7510 Poet, R., Multichannel Effects in Low Energy Inelastic Electron Atom Collisions, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 671-672 (1975).
- 7511 Fon, W. C., Kingston, A. E., and Burke, P. G., Calculation of Differential Cross Sections for Elastic and Inelastic Scattering of Electrons by Atomic Hydrogen, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 669-670 (1975).
- 7512 Sil, N. C., and Saha, B. C., Elastic e^- -H Scattering at Low Energies, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 667-668 (1975).
- 7513 Elston, S. B., Lawton, S. A., and Pichanick, F. M. J., High-Resolution Study of the Threshold Resonance in the $n = 2$ Excitation of Atomic Hydrogen, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 665-666 (1975).
- 7514 Williams, J. F., and Callaway, J., Scattering of Electrons from Hydrogen Atoms at Energies of 10 to 30 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 686-687 (1975).
- 7515 Williams, J. F., Angular Dependence of Resonance Structure Below the $n = 2$ Level of Atomic Hydrogen, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 684-685 (1975).
- 7516 Williams, J. F., Excitation of the $n = 2$ States of Atomic Hydrogen by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 682-683 (1975).
- 7517 Massaro, P. A., Faddeev-Pade Method in e-H Scattering, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 680-681 (1975).
- 7518 Lins De Barros, H. G. P., and Brandi, H. S., The Use of Atomic Wave Functions with Fractional Occupation Number to Calculate Excitation Cross Sections by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 831-832 (1975).
- 7519 Byron Jr., F. W., and Joachain, C. J., Electron Impact Excitation of the 2^1S State of Helium at Intermediate and High Energies, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 829-830 (1975).
- 7520 Joyez, G., Huetz, A., Landau, M., Mazeau, J., and Pichou, F., Absolute Differential and Integral Cross Sections for Electron Impact Excitation of the $n = 2$ States of Helium from Threshold to 3.5 eV Above, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions

- (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 827–828 (1975).
- 7521 Huetz, A., Joyez, G., Mazeau, J., and Pichou, F., Behaviour of the Differential Cross Sections for Electron Scattering in the Vicinity of the 2^1S Threshold of He, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 825–826 (1975).
- 7522 Stone, E. J., Lawrence, G. M., and Seitel, S. C., Time-of-Flight Spectrum of Ground State Atoms from Dissociation of O_2 , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 816–817 (1975).
- 7523 Phaneuf, R. A., Crandall, D. H., and Dunn, G. H., Production of $D^+(n = 4)$ from Electron- D_2^+ Dissociative Recombination, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 814–815 (1975).
- 7524 Khayrallah, G. A., and Smith, S. J., Production of Excited Hydrogen Atoms ($n = 3, 4, 5$) in Dissociative Excitation of Molecular Hydrogen by Electron Impact, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 808–809 (1975).
- 7525 Polyakova, G. N., Rotational and Vibrational Energy Level Distributions of Excited CH and CO^+ Molecules Produced in Collisions of 300 eV Electrons with CH_2O , $HCOOH$, and CH_3COOH Molecules, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 802–803 (1975).
- 7526 Mohlmann, G. R., and De Heer, F. J., Production of H^* and CH^* by Electrons on Hydrocarbons, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 800–801 (1975).
- 7527 Loch, R., and Durrer, J. M., The Dissociative Ionization of CO by Electron Impact. The C^+ Ion Formation, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 798–799 (1975).
- 7528 Tronc, M., Cadez, I. M., Schermann, C., and Hall, R. I., Dissociative Attachment of Electrons in CO: Angular Distribution of the O^- Ions, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 795–796 (1975).
- 7529 Abouaf, R., Paineau, R., and Fiquet-Fayard, F., Appearance Potentials of Negative Ions Produced by Dissociative Attachment in NO_2 , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 793–794 (1975).
- 7530 Smith, K., On the Convergence of Close-Coupling Expansion for Electron Impact Excitation of N^+ , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 786–787 (1975).
- 7531 Westerveld, W. B., and Van Eck, J., On the Negative Ion Formation in Electron-Helium Scattering Around 50 eV, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 782–783 (1975).
- 7532 Andrick, D., Langhans, L., Linder, F., and Seng, G., Measurement of Elastic and Inelastic e-He Scattering in the Vicinity of the 2^3S -Threshold, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 833–834 (1975).
- 7533 Yagishita, A., Takayanagi, T., Wakiya, K., and Suzuki, H., Measurement of Differential Cross Sections for Excitation of Spin-Forbidden Transitions in He by Electron Impact of Intermediate Energy, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 835–836 (1975).
- 7534 Brandi, H. S., and Lins De Barros, H. G. P., Triplet Excitation of Helium by Electron Impact, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 837–838 (1975).
- 7535 Ochkur, V. I., and Burkova, L. A., On the Differential Cross-Sections for Exchange Transitions in He Induced by Electron Impact, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 839–840 (1975).
- 7536 Nesbet, R. K., Electron Scattering by He near the 2^3S and 2^1S Excitation Thresholds, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 841–842 (1975).
- 7537 Chutjian, A., and Srivastava, S. K., Experimental-Theoretical Comparisons of Differential $1^1S \rightarrow 2^1P$ Magnetic Sublevel Cross Sections for Electron-Helium Scattering at 60 and 80 eV, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and*

- Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 843–844 (1975).
- 7538 Mark, T. D., Cross Section for Single and Double Ionization of N_2 and O_2 by Electron Impact from Threshold up to 170 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 885–886 (1975).
- 7539 Mark, T. D., and Egger, F., Cross Section for the Electron Impact Ionization Processes $H_2O(D_2O) + e \rightarrow H_2O^+(D_2O^+) + 2e$ from Threshold up to 170 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 887–888 (1975).
- 7540 Amusia, M. Ya., Berezina, N. B., and Chernysheva, L. V., Single Charge Ionization by Electron Impact of Kr and Xe Outer Shells in the Vicinity of the Inner Shell Threshold, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 889–890 (1975).
- 7541 McGuire, J. H., and Golden, J. E., Calculations of Total Ionization Cross Sections in Atomic Hydrogen and Helium by Electron Impact Using the Glauber Approximation, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 891–892 (1975).
- 7542 Gordeev, Yu. S., Schemelinin, S. G., and Andreev, E. P., Fast Electron Scattering with Simultaneous Detachment of Two Electrons from Outer Shells of Inert Gas Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 893–894 (1975).
- 7543 Zapesochnyi, I. P., Kontros, J. E., and Shimon, L. L., A Study of Electron Impact Ionization in the Aluminium Group, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 900–901 (1975).
- 7544 Langenberg, A., Multiple Outer Shell Ionization of Ne and Ar by Electron and Proton Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 902–903 (1975).
- 7545 Delage, A., Roy, D., and Carrete, J.-D., Inelastic Scattering of Electrons in Krypton, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 1099–1100 (1975).
- 7546 Amusia, M. Ya., Sheftel, S. I., and Chernysheva, L. V., Inelastic Electron Scattering on the Outer Shell of Xe with Account of Correlations, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1102–1103 (1975).
- 7547 Williams, W., Trajmar, S., and Bozinis, D. G., Electron Impact Excitation of Lithium at 20 eV Impact Energy, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1107–1108 (1975).
- 7548 Shuttleworth, T., Newell, W. R., and Smith, A. C. H., High Resolution Inelastic Electron Scattering of Sodium Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1109–1110 (1975).
- 7549 Leep, D., and Gallagher, A., Excitation of the Mg and Mg^+ Resonance Lines by Electron Impact on Mg Atoms, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1111–1112 (1975).
- 7550 Robb, W. D., Calculations of Electron–Impact Excitation Cross Sections for Atomic Magnesium, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1113–1114 (1975).
- 7551 Aleksakhin, I. S., and Shafranyosh, I. I., Effective Cross Sections for the Step–Wise Excitation of Barium Atoms by Electron Impact, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 1115–1116 (1975).
- 7552 Damburg, R. J., and Fabrikant, I. I., Effect of p–d Coupling on Excitation Cross Sections of Resonance Lines of Ca, Sr, Ba, Cs, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1117–1118 (1975).
- 7553 Bozinis, D. G., and Williams, W., Electron Impact Excitation of Zinc Vapor at 40 eV, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 1121–1122 (1975).
- 7554 Winter, N. W., Cartwright, D. C., and Wray, M. M., Elastic Scattering of Electrons by Atomic Cu, (In) Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24–30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1123–1124 (1975).
- 7555 Manson, S. T., Starace, A. F., and Dill, D., Angular Distribution of Photoelectrons from Atomic Selenium and Bromine, (In) Electronic and Atomic Collisions: Abstracts of

- Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 569-570 (1975).
- 7556 Mintz, D. M., and Kuppermann, A., Electron Energy Dependence of the Differential Photoelectron Cross Sections of Neon and Nitrogen, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **1**, 567-568 (1975).
- 7557 Chupka, W. A., Dehmer, P. M., and Jivry, W. T., High-Resolution Study of Photoionization Processes in H_2 , HD and D_2 , (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1130-1131 (1975).
- 7558 Samson, J. A. R., and Haddad, G. N., Average Energy Loss per Ion Pair Formation by Photon and Electron Impact, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1133-1134 (1975).
- 7559 Amusia, M. Ya., Ivanov, V. K., and Chernysheva, L. V., Photoionization of $4d^{10}$ Electrons in Cs and Ba, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975) J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1135-1136 (1975).
- 7560 Burke, P. G., and Taylor, K. T., Photoionization of Neon and Argon, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1175-1176 (1975).
- 7561 Le Dourneuf, M., Lan, V. K., Chang, J.-J., and Taylor, K. T., Photoionization of Aluminum and Oxygen, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1177-1178 (1975).
- 7562 Starace, A. F., and Armstrong Jr., L., Photoionization Cross Sections for Atomic Chlorine Using an Open-Shell Random Phase Approximation, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 1179-1180 (1975).
- 7563 Farnoux, F. C., The Hartree-Fock Approximation in the Calculation of Photoionization Cross Sections for Heavy Atoms, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 1183-1184 (1975).
- 7573 Byron Jr., F. W., Eikonal-Born Series Methods in Electron-Atom Scattering, (In) *Atomic Physics: Proceedings of the Fourth International Conference on Atomic Physics* (Heidelberg, Germany, 22-26 July 1974), G. Zu Putlitz, E. W. Weber and A. Winnacker, editors, Plenum Press, New York, **4**, 337-353 (1975).
- 7574 McDowell, M. R. C., Symms, R. F., Morgan, L. A., and Myerscough, V. P., Electron Impact Excitation of the $n = 3$ States of Atomic Hydrogen, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington **2**, 673-674 (1975).
- 7575 Coleman, P. G., Griffith, T. C., Heyland, G. R., and Killeen, T. L., Interaction of Low Energy Positrons with Gaseous Atoms and Molecules, (In) *Atomic Physics: Proceedings of the Fourth International Conference on Atomic Physics* (Heidelberg, Germany, 22-26 July 1974), G. Zu Putlitz, E. W. Weber and A. Winnacker, editors, Plenum Press, New York, **4**, 355-371 (1975).
- 7576 Stebbings, R. F., Dunning, F. B., and Rundel, R. D., Photoionization and Autoionization of Excited Rare Gas Atoms (In) *Atomic Physics: Proceedings of the Fourth International Conference on Atomic Physics* (Heidelberg, Germany, 22-26 July 1974), G. Zu Putlitz, E. W. Weber and A. Winnacker, editors, Plenum Press, New York, **4**, 713-730 (1975).
- 7582 Foster, M. S., and Beauchamp, J. L., Electron Attachment to Sulphur Hexafluoride: Formation of Stable SF_6^- at Low Pressure, *Chem. Phys. Lett.* **31**, 482-486 (1975).
- 7583 Mileev, V. N., Safin, V. I., and Strakhova, S. I., Inelastic Scattering of Electrons from Inert Gas Atoms in the Eikonal Distorted-Wave Approximation, *Phys. Lett. A* **55**, 333-334 (1976).
- 7584 Miller, J. L., and George, E. V., High-Pressure Absorption Spectrum of CO_2 Laser Bands at 10 μm , *Appl. Phys. Lett.* **27**, 665-667 (1975).
- 7585 Ambartsumian, R. V., Bekov, G. I., Letokhov, V. S., and Mishin, V. I., Excitation of High-Lying State of the Sodium Atom by Dye-Laser Radiation and Their Autoionization in an Electric Field, *JETP Lett.* **21**, 279-281 (1975).
- 7586 Riggins, M., and Dunbar, R. C., Photodissociation of CH_4^+ via Ion Cyclotron Resonance, *Chem. Phys. Lett.* **31**, 539-542 (1975).
- 7587 Brown, R. T., Differential Cross Sections for Coherent Photon Scattering by Elements $Z = 2$ through $Z = 26$, *At. Data Nucl. Data Tables* **15**, 111-139 (1975).
- 7588 Peatman, W. B., Direct Observation of Rotational States of Molecular Ions in Photoionization Processes, *Chem. Phys. Lett.* **36**, 495-499 (1975).
- 7590 Davis, J., Kepple, P. C., and Blaha, M., Distorted Wave Calculations for Multiply Charged Nitrogen and Oxygen, *J. Quant. Spectrosc. Radiat. Transfer* **15**, 1145-1148 (1975).
- 7591 Eyb, M., Resonance Scattering of Low-Energy Electrons from Potassium Atoms, *J. Phys. B* **9**, 101-110 (1976).
- 7592 Nakazaki, S., Coulomb-Born Cross Sections for Excitation of O VII Ion by Electron Impact, ISAS Research Note No. 1, Institute of Space and Aeronautical Science, University of Tokyo, Tokyo, Japan, 14 pages (1976).
- 7593 Heindorff, T., Hoffit, J., and Dabkiewicz, P., Elastic Electron Scattering from Krypton and Xenon for Collision Energies up to 10.5 eV, *J. Phys. B* **9**, 89-99 (1976).
- 7594 Tsuboi, T., Oda, N., and Hatano, Y., Angular Dependence of the Energy Loss Spectra for Argon by Low Energy Electron Impact, *Chem. Phys. Lett.* **37**, 499-501 (1976).
- 7595 Van Der Wiel, M. J., Stoll, W., Hamnett, A., and Brion, C. E., Partial Oscillator Strengths (25-50 eV) of the One-Electron States of CH_4^+ , Measured in an (e,2e) Experiment, *Chem. Phys. Lett.* **37**, 240-242 (1976).

- 7596 Dehmel, R. C., Fineman, M. A., and Miller, D. R., Angular Scattering of Low-Energy Electrons by Atomic and Molecular Oxygen, Argon, and Helium, *Phys. Rev. A* **13**, 115-122 (1976).
- 7597 Truhlar, D. G., Poling, R. E., and Brandt, M. A., Infinite-Order Sudden Approximation for Rotational Excitation of Hydrogen Molecules by Electrons in the Energy Range 10-40 eV, *J. Chem. Phys.* **64**, 826-829 (1976).
- 7598 Mathis, R. F., and Vroom, D. A., The Energy Distributions of Secondary Electrons from Ar, N₂, H₂O, and H₂O with Clusters Present, *J. Chem. Phys.* **64**, 1146-1149 (1976).
- 7599 Leep, D., and Gallagher, A., Excitation of the Mg and Mg⁺ Resonance Lines by Electron Impact on Mg Atoms, *Phys. Rev. A* **13**, 148-155 (1976).
- 7600 Mahan, A. H., Gallagher, A., and Smith, S. J., Electron Impact Excitation of the 3S, 3P, and 3D States of H, *Phys. Rev. A* **13**, 156-166 (1976).
- 7601 Chandra, N., and Temkin, A., Hybrid Theory and Calculation of e-N₂ Scattering, *Phys. Rev. A* **13**, 188-203 (1976).
- 7602 Tambe, B. R., and Henry, R. J. W., Low-Energy Scattering of Electrons by Atomic Oxygen, *Phys. Rev. A* **13**, 224-228 (1976).
- 7603 Janes, G. S., Itzkan, I., Pike, C. T., Levy, R. H., and Levin, L., Two-Photon Laser Isotope Separation of Atomic Uranium: Spectroscopic Studies, Excited-State Lifetimes, and Photoionization Cross Sections, *IEEE J. Quantum Electron.* **12**, 111-120 (1976).
- 7604 Broad, J. T., and Reinhardt, W. P., L² Calculation of the Total Photoabsorption Cross Section of H from Threshold to 50 eV, *Chem. Phys. Lett.* **37**, 212-216 (1976).
- 7605 Rescigno, T. N., McCurdy Jr., C. W., and McKoy, V., Photoabsorption Cross Sections of Two-Electron Atoms by the Coordinate Rotation Method: Application to H and Several States of He, *J. Chem. Phys.* **64**, 477-480 (1976).
- 7606 Fliflet, A. W., and Kelly, H. P., Photoionization of the 3d, 3p, and 3s Subshells of Zn I, *Phys. Rev. A* **13**, 312-317 (1976).
- 7607 Nowak, A. V., and Lyman, J. L., The Temperature-Dependent Absorption Spectrum of the ν₃ Band of SF₆ at 10.6 μm, *J. Quant. Spectrosc. Radiat. Transfer* **15**, 945-961 (1975).
- 7616 Jung, K., Schubert, E., Ehrhardt, H., and Paul, D. A. L., Measurement of the Five-Fold Differential Cross Sections for the Ionization of Neon by 100 eV and 250 eV Electrons, *J. Phys. B* **9**, 75-87 (1976).
- 7635 Luczynski, Z., and Wincel, H., Negative Ion Reactions in the Gas Phase—II. The Effect of the Ionizing Electron Energy on Cl⁻ Solvation in Methyl and Ethyl Chloride, *Int. J. Radiat. Phys. Chem.* **7**, 713-718 (1975).
- 7636 Bui, T. D., and Stauffer, A. D., The Scattering Equations for Charged Particles Colliding with Many Body Systems, *Can. J. Phys.* **53**, 1615-1623 (1975).
- 7637 Black, G., Sharpless, R. L., and Lorents, D. C., Quantum Yields of O(¹S) from N₂O and Si(¹S) from OCS in the Vacuum Ultraviolet, *IEEE J. Quantum Electron.* **11**, 704 (1975).
- 7664 Bernauer, O., and Weil, K. G., Massenspektrometrische Untersuchungen an Silberhalogeniden III: Silberbromid und Silberjodid, *Ber. Bunsenges. Phys. Chem.* **78**, 1339-1344 (1974).
- 7691 Hubin-Franskin, M.-J., Locht, R., and Katihabwa, J., Dissociative Ionization of Carbon Disulphide in the Gas Phase. Heat of Formation of the CS Radical, *Chem. Phys. Lett.* **37**, 488-493 (1976).
- 7703 Duguet, A., and Jaegle, A., Mesure des Sections Efficaces Différentielles Totales de Diffusion des Electrons de 40 keV par l'Atome d'Argon. Effet de Correlations Electroniques, *J. Phys. (Paris) Lett.* **36**, L193-L195 (1975).
- 7704 Rebbert, R. E., and Ausloos, P. J., Photodecomposition of CFCl₃ and CF₃Cl₂, *J. Photochem.* **4**, 419-434 (1975).
- 7719 Vainshtein, L. A., Role of Exchange in the Excitation of Ions by Electrons, *Sov. Phys. JETP* **40**, 32-35 (1975).
- 7720 Kauppila, W. E., Stein, T. S., and Jesion, G., Direct Observation of a Ramsauer-Townsend Effect in Positron-Argon Collisions, *Phys. Rev. Lett.* **36**, 580-584 (1976).
- 7759 Ogawa, S., and Ogawa, M., Absorption Cross Sections of O₂(a¹Δ_g) and O₂(X³Σ_g⁻) in the Region from 1087 to 1700 Å, *Can. J. Phys.* **53**, 1845-1852 (1975).
- 7760 Lee, L. C., Judge, D. L., and Ogawa, M., CS₂⁺(B²Σ_u⁺, A²Π_u) → X²Π_g) Fluorescence from Photoionization Excitation of CS₂ Vapor, *Can. J. Phys.* **53**, 1861-1868 (1975).
- 7801 Ishihara, T., and Chen, J. C. Y., Eikonal Approximation for Scattering of Charged Particles by Ions, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **1**, 79-80 (1975).
- 7854 Guha, S., and Ghosh, A. S., Elastic Scattering of Electrons and Positrons by Sodium Atoms, *Indian J. Phys.* **49**, 177-181 (1975).
- 7855 Gomet, J.-C., Determination Experimentale des Sections Efficaces Absolues Partielles d'Ionisation de l'Eau et de l'Ammoniac par Impact Electronique, *C. R. Acad. Sci. Ser. B* **281**, 627-630 (1975).
- 7856 Gau, J. N., and Macek, J., Inelastic Electron-Hydrogen Scattering in the Unrestricted Glauber Approximation, *Phys. Rev. A* **12**, 1760-1770 (1975).
- 7857 Byron Jr., F. W., and Latour Jr., L. J., Excitation of Atomic Hydrogen in the Eikonal-Born-Series Approximation, *Phys. Rev. A* **13**, 649-664 (1976).
- 7858 Srivastava, S. K., Chutjian, A., and Trajmar, S., Absolute Elastic Differential Electron Scattering Cross Sections in the Intermediate Energy Region. II. N₂, *J. Chem. Phys.* **64**, 1340-1344 (1976).
- 7859 Bhattacharyya, P. K., and Ghosh, A. S., Elastic Positron-Hydrogen-Molecule Scattering Using the Eikonal Approximation, *Phys. Rev. A* **12**, 1881-1884 (1975).
- 7860 Fano, U., Unified Treatment of Perturbed Series, Continuous Spectra and Collisions, *J. Opt. Soc. Am.* **65**, 979-987 (1975).
- 7861 Ambartsumian, R. V., Furzikov, N. P., Letokhov, V. S., and Puresky, A. A., Measuring Photoionization Cross-Sections of Excited Atomic States, *Appl. Phys.* **9**, 335-337 (1976).
- 7862 Daum, G. R., and Kelly, H. P., Photoionization Cross Section of Si II from Threshold to 1 keV, *Phys. Rev. A* **13**, 715-725 (1976).
- 7863 Reed, K. J., Zimmerman, A. H., Andersen, H. C., and Brauman, J. I., Cross Sections for Photodetachment of Electrons from Negative Ions near Threshold, *J. Chem. Phys.* **64**, 1368-1375 (1976).
- 7864 Gentieu, E. P., and Mentall, J. E., Cross Sections for Producing CO₂⁺(A²Π-X²Π) and CO₂⁺(B²Σ-X²Π) Fluorescence by Photoionization of CO₂, *J. Chem. Phys.* **64**, 1376-1380 (1976).
- 7865 Bhatia, A. K., Temkin, A., and Silver, A., Photoionization of Lithium, *Phys. Rev. A* **12**, 2044-2051 (1975).
- 7881 Parikh, M., Calculation of Dissociative Ionization Cross Sections of Diatomic Molecules, *Phys. Rev. A* **12**, 1872-1880 (1975).
- 7882 Abouaf, R., Paineau, R., and Fiquet-Fayard, F., Dissociative Attachment in NO₂ and CO₂, *J. Phys. B* **9**, 303-314 (1976).
- 7883 Walters, H. R. J., On the Elastic Scattering of Electrons by Lithium and the Total Cross Sections for Electron Impact on

- Lithium, Sodium and Potassium, *J. Phys. B* **9**, 227-237 (1976).
- 7884 Jansen, R. H. J., and De Heer, F. J., Absolute Differential Cross Sections for Elastic Scattering of Electrons by Krypton and Xenon, *J. Phys. B* **9**, 213-226 (1976).
- 7885 Jansen, R. H. J., De Heer, F. J., Luyken, H. J., Van Wingerden, B., and Blaauw, H. J., Absolute Differential Cross Sections for Elastic Scattering of Electrons by Helium, Neon Argon and Molecular Nitrogen, *J. Phys. B* **9**, 185-212 (1976).
- 7886 Wilson, W. G., and Williams, W. L., Total Cross Sections for the Scattering of Low-Energy Electrons by Helium Metastable Atoms, *J. Phys. B* **9**, 423-432 (1976).
- 7887 Pradhan, A. K., Close-Coupling Calculations for Electron Collisions with O^+ and for Bound States of Neutral Oxygen, *J. Phys. B* **9**, 433-443 (1976).
- 7888 Boesten, L. G. J., Heideman, H. G. M., Bensen, T. F. M., and Banks, D., Threshold Effects in the Ionization of He^+ by Electron Impact, *J. Phys. B* **9**, L1-L4 (1976).
- 7889 Prema Chand, K., Reddy, D. K. S., Radha Krishna Murty, V., Rama Rao, J., and Lakshminarayana, V., Photoelectric Cross Sections of Low-Energy Photons in Light Elements, *J. Phys. B* **9**, 177-184 (1976).
- 7890 West, J. B., Woodruff, P. R., Codling, K., and Houlgate, R. G., The 4d, 5s and 5p Partial Photoionization Cross Sections of Xenon Above the 4d Threshold, *J. Phys. B* **9**, 407-410 (1976).
- 7896 Morrison, M. A., and Lane, N. F., Pseudo-Bound-State Study of Low-Energy Electron-Molecule Collisions: Elastic $e-H_2$ Scattering, *Phys. Rev. A* **12**, 2361-2368 (1975).
- 7897 Berrington, K. A., Burke, P. G., and Robb, W. D., The Scattering of Electrons by Atomic Nitrogen, *J. Phys. B* **8**, 2500-2511 (1975).
- 7898 Burnett, T., Rountree, S. P., Doolen, G. D., and Robb, W. D., Differential Cross Sections for Electron-Impact Ionization of Helium, *Phys. Rev. A* **13**, 626-631 (1976).
- 7899 Malinovsky, M., New Calculations of Atomic Data Concerning E.U.V. Lines of O V, *Astron. Astrophys.* **43**, 101-110 (1975).
- 7900 Backx, C., Wight, G. R., and Van Der Wiel, M. J., Oscillator Strengths (10-70 eV) for Absorption, Ionization and Dissociation in H_2 , HD and D_2 , Obtained by an Electron-Ion Coincidence Method, *J. Phys. B* **9**, 315-331 (1976).
- 7901 Lefavre, D., and Marmet, P., Electron Excitation of Ar Between 26 and 34 eV, *Int. J. Mass Spectrom. Ion Phys.* **18**, 153-164 (1975).
- 7902 Duzy, C., and Berry, R. S., Photoionization and Rydberg States of N_2 , *J. Chem. Phys.* **64**, 2421-2430 (1976).
- 7903 Duzy, C., and Berry, R. S., Autoionization of N_2 , *J. Chem. Phys.* **64**, 2431-2436 (1976).
- 7904 Mori, K., Photoionization Yield of Nitric Oxide at Hydrogen Lyman Alpha 1215 Å, *Sci. Pap. Inst. Phys. Chem. Res. (Jpn.)* **69**, 1-5 (1975).
- 7913 John, T. L., and Williams, R. J., The Free-Free Continuous Absorption Coefficient of the Negative Carbon Ion, *Mon. Not. R. Astron. Soc.* **174**, 253-258 (1976).
- 7917 Latimer, C. J., West, W. P., Cook, T. B., Dunning, F. B., and Stebbings, R. F., Studies of Xenon Atoms in High Rydberg States, (In) *Electronic and Atomic Collisions: Abstracts of Papers of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, **2**, 849-850 (1975).
- 7975 Freund, R. S., Schiavone, J. A., and Brader, D. F., Dissociative Excitation of H_2 : Spectral Line Shapes and Electron Impact Cross Sections of the Balmer Lines, *J. Chem. Phys.* **64**, 1122-1127 (1976).
- 7976 Koike, F., Low Energy Resonant Electron Scattering by O_2 and NO, *J. Phys. Soc. Jpn.* **39**, 1590-1595 (1975).
- 7977 Kurepa, M. V., Pejcev, V. M., and Cadez, I. M., Total Ionization and Dissociative Attachment Cross-Sections of Boron Trifluoride by Electron Impact, *J. Phys. D* **9**, 481-484 (1976).
- 7978 Jamieson, M. J., Rotational Excitation ($J = 0 \rightarrow J = 2$) of Polar Molecules in the Sudden Approximation, *Chem. Phys. Lett.* **37**, 191-194 (1976).
- 7979 Sharp, J. M., Comer, J., and Hicks, P. J., Autoionizing Transitions in Neon Studied by Low-Energy Electron Impact, *J. Phys. B* **8**, 2512-2519 (1975).
- 7980 Guyon, P. M., Chupka, W. A., and Berkowitz, J., Photoionization Mass Spectrometric Study of Formaldehyde H_2CO , HDCO and D_2CO , *J. Chem. Phys.* **64**, 1419-1436 (1976).
- 7992 Drewitz, H.-J., Die Bestimmung Relativer Ionisierungsquerschnitte und Reaktionskonstanten von Ionen-Molekül-Reaktionen bei Anfangsenergie-Diskriminierung. II. Relative Ionisierungs-querschnitte Mehrfach Geladener Ar-Ionen, Reaktionskonstanten von Ionen-Molekül-Reaktionen, Anfangsenergien von Sekundär-Ionen, *Int. J. Mass Spectrom. Ion Phys.* **19**, 313-325 (1976).
- 8004 Bates, D. R., Recombination, *Case Stud. At. Phys.* **4**, 57-92 (1974).
- 8005 Stewart, R. F., Victor, G. A., and Laughlin, C., The Calculation of Continuum Properties of Li^- and Na^- by a Green's Function Method, *J. Phys. B* **8**, 1603-1612 (1975).
- 8006 Backx, C., and Van Der Wiel, M. J., Electron-Ion Coincidence Measurements of CH_3^+ , *J. Phys. B* **8**, 3020-3033 (1975).
- 8022 Chandra, S., Jain, N. K., and Narain, U., A Comparative Study of Some Empirical and Semiempirical Approaches, *Acta Cienc. Indica* **1**, 259-262 (1975).
- 8023 Peixoto, E. M. A., and Nogueira, J. C., Total Relative Differential Cross Section for 500-eV and 1-keV Electrons Scattered by Nitrogen (N_2), *Phys. Rev. A* **13**, 1352-1357 (1976).
- 8024 Kumar, S., and Srivastava, M. K., Glauber Cross Sections for the $2s \rightarrow 2p$ Resonance Excitation in Lithium by Electron Impact, *Phys. Rev. A* **13**, 1307-1311 (1976).
- 8025 Srivastava, S. K., and Trajmar, S., Differential Elastic Cross Sections for High Angle Electron Scattering by He in the Intermediate Energy Region, *J. Chem. Phys.* **64**, 3886-3888 (1976).
- 8026 Yagishita, A., Takayanagi, T., and Suzuki, H., Differential Cross Sections for Excitation of the 2^1S and the 2^1P States in He by Electron Collision in the Intermediate Energy Region, *J. Phys. B* **9**, L53-L57 (1976).
- 8027 Sinfailam, A. L., Differential Cross Sections of Low-Energy Electron-Helium Scattering, *J. Phys. B* **9**, L101-L104 (1976).
- 8028 Hanne, G. F., and Kessler, J., Study of Exchange Excitation in Mercury by Means of Polarized Electrons. I. Experiment, *J. Phys. B* **9**, 791-804 (1976).
- 8029 Zapasochnyi, I. P., Postoi, E. N., and Aleksakhin, I. S., Excitation of Resonance Levels of Alkali Metal Atoms by Electron Impact, *Sov. Phys. JETP* **41**, 865-870 (1976).
- 8030 Basu, D., Banerji, G., and Ghosh, A. S., Positron-Hydrogen Scattering Using an Integral Approach, *Phys. Rev. A* **13**, 1381-1387 (1976).
- 8031 Greel, C. L., and Ross, J., Photodissociation of NO_2 in the Region 458-630 nm, *J. Chem. Phys.* **64**, 3560-3566 (1976).
- 8032 Starace, A. F., and Armstrong Jr., L., Photoionization Cross Sections for Atomic Chlorine Using an Open-Shell Random-Phase Approximation, *Phys. Rev. A* **13**, 1850-1865 (1976).
- 8033 Palenius, H. P., Kohl, J. L., and Parkinson, W. H., Absolute Measurement of the Photoionization Cross Section of Atomic Hydrogen with a Shock Tube for the Extreme Ultraviolet, *Phys. Rev. A* **13**, 1805-1816 (1976).

- 8034 Davenport, J. W., Ultraviolet Photoionization Cross Sections for N_2 and CO, Phys. Rev. Lett. **36**, 945-948 (1976).
- 8035 Bradley, D. J., Dugan, C. H., Ewart, P., and Purdie, A. F., Absolute Photoionization Cross-Section Measurement of Selectively Excited Magnesium, Phys. Rev. A **13**, 1416-1421 (1976).
- 8036 Amusia, M. Ya., Cherepkov, N. A., Zivanovic, D., and Radojevic, V., Photoabsorption for Helium, Lithium, and Beryllium Atoms in the Random-Phase Approximation with Exchange, Phys. Rev. A **13**, 1466-1474 (1976).
- 8037 Carter, S. L., and Kelly, H. P., Photoionization Cross Section of the ^3P Ground State of Neutral Carbon, Phys. Rev. A **13**, 1388-1401 (1976).
- 8038 Driver, R. D., A Measurement of the 3p Subshell Photoionization Cross Section of Potassium, J. Phys. B **9**, 817-827 (1976).
- 8054 Gee, C. S., Percival, I. C., Lodge, J. G., and Richards, D., Theoretical Rates for Electron Excitation of Highly-Excited Atoms, Mon. Not. R. Astron. Soc. **175**, 209-215 (1976).
- 8055 Foster, G., and Williamson Jr., W., Electron-Hydrogen Elastic Scattering in the Eikonal Approximation, Phys. Rev. A **13**, 936-940 (1976).
- 8056 Tiwary, S. N., and Rai, D. K., Excitation of the Autoionizing Level in Zn I and Cd I, J. Phys. B **9**, 631-633 (1976).
- 8057 Kingston, A. E., Fon, W. C., and Burke, P. G., The 1s-2s and 1s-2p Excitation of Atomic Hydrogen by Electron Impact, J. Phys. B **9**, 605-618 (1976).
- 8058 McCurdy Jr., C. W., Rescigno, T. N., and McKoy, V., A Simple Method for Evaluating Low-Energy Electron-Molecule Scattering Cross Sections Using Discrete Basis Functions, J. Phys. B **9**, 691-698 (1976).
- 8059 Codling, K., Houlgate, R. G., West, J. B., and Woodruff, P. R., Angular Distribution and Photoionization Measurements on the 2p and 2s Electrons in Neon, J. Phys. B **9**, L83-L86 (1976).
- 8060 Lee, L. C., Carlson, R. W., and Judge, D. L., $CO^+(A^2\Pi \rightarrow X^2\Sigma^+)$ and $CO_2^+(A^2\Pi_u \rightarrow X^2\Pi_g)$ Fluorescence Produced by Vacuum Ultraviolet Radiation Between 175-750 Å, J. Phys. B **9**, 855-863 (1976).
- 8061 Yurev, M. S., and Yarunin, V. S., Photoionization of CO and CO_2 Molecules, Opt. Spectrosc. (USSR) **39**, 378-381 (1975).
- 8066 Baluja, K. L., and Taylor, H. S., Many-Body Green's Function Theory of Electron Impact Ionization: Coincident Ionization of Helium, J. Phys. B **9**, 829-835 (1976).
- 8067 Wight, G. R., Van Der Wiel, M. J., and Brion, C. E., Dipole Excitation, Ionization and Fragmentation of N_2 and CO in the 10-60 eV Region, J. Phys. B **9**, 675-689 (1976).
- 8068 Vuskovic, L., and Kurepa, M. V., Differential Cross Sections of 60-150 eV Electrons Elastically Scattered in Argon, J. Phys. B **9**, 837-842 (1976).
- 8069 Schmidt, V., Sandner, N., and Kuntzemuller, H., Double Ionization of Rare Gases. I. Ion Formation by Electron Impact, Phys. Rev. A **13**, 1743-1747 (1976).
- 8070 Foster, G., and Williamson Jr., W., Positron-Hydrogen Elastic Scattering in the Eikonal Approximation, Phys. Rev. A **13**, 1265-1268 (1976).
- 8071 Schmidt, V., Sandner, N., Kuntzemuller, H., Dhez, P., Willeumier, F., and Kallne, E., Double Ionization of Rare Gases. II. Ion Formation by Photon Impact, Phys. Rev. A **13**, 1748-1755 (1976).
- 8077 Roy, T., and Bhattacharyya, S., Differential Cross-Section for Excitation of Helium by Electron from Field Theoretic View Point, Ann. Phys. (Leipzig) **33**, 1-5 (1976).
- 8078 Maceda, E. L., Bathke, C. G., and Miley, G. H., Uranium Excited-State Parameters, Trans. Am. Nucl. Soc. **22**, 153-155 (1975).
- 8079 Srivastava, S. K., Trajmar, S., Chutjian, A., and Williams, W., Absolute Elastic Differential Electron Scattering Cross Sections in the Intermediate Energy Region. III. SF_6 and UF_6 , J. Chem. Phys. **64**, 2767-2771 (1976).
- 8080 Backx, C., Wight, G. R., Tol, R. R., and Van Der Wiel, M. J., Electron-Electron Coincidence Measurements of CH_4 , J. Phys. B **8**, 3007-3019 (1975).
- 8081 Makeev, G. N., Sinyanskii, V. F., and Smirnov, B. M., Absorption Spectra of Certain Fluorides in the near Ultraviolet Region, Dokl. Akad. Nauk SSSR Phys. Chem. Ser. **222**, 452-455 (1975).
- 8082 Kaplan, I. G., and Markin, A. P., Effect of the Chemical Bond on the Photoionization Cross Section in a Region Remote from the Threshold Value, Dokl. Akad. Nauk SSSR Phys. Chem. Ser. **223**, 836-839 (1975).
- 8083 Seguin, H. J. J., McKen, D., and Tulip, J., Photon Emission and Photoionization Measurements in the CO_2 Laser Environment, Appl. Phys. Lett. **28**, 487-489 (1976).
- 8107 Brandt, M. A., and Truhlar, D. G., Test of the Infinite-Order Sudden Approximation for Electron Scattering at Intermediate Energy, Chem. Phys. **13**, 461-467 (1976).
- 8108 Kim, Y.-K., Energy Distribution of Secondary Electrons. II. Normalization and Extrapolation of Experimental Data, Radiat. Res. **64**, 205-216 (1975).
- 8109 Chen, S. T., Leep, D., and Gallagher, A., Excitation of the Sr and Sr^+ Resonance Lines by Electron Impact on Sr Atoms, Phys. Rev. A **13**, 947-952 (1976).
- 8110 Chandra, S., and Narain, U., Radiative Attachment of Electrons with Some Alkali Atoms, Prog. Theor. Phys. **55**, 337-339 (1976).
- 8111 Narumi, H., Tsuji, A., and Miyamoto, A., Multiple Scattering Amplitude of the Ionization by Charged Particles in the Intermediate Energy Region, Prog. Theor. Phys. **54**, 740-746 (1975).
- 8112 Hubbell, J. H., Veigle, W. J., Briggs, E. A., Brown, R. T., Cromer, D. T., and Howerton, R. J., Atomic Form Factors, Incoherent Scattering Functions, and Photon Scattering Cross Sections, J. Phys. Chem. Ref. Data **4**, 471-538 (1975).
- 8134 Chandra, S., and Narain, U., Electron Detachment Cross Sections of Negative Ions, Indian J. Phys. **49**, 900-903 (1975).
- 8135 Gelebart, F., Tweed, R. J., and Peresse, J., Autoionisation of Helium by Electron Impact, Comments At. Mol. Phys. **5**, 79-87 (1976).
- 8152 Amusia, M. Ya., Cherepkov, N. A., Chernysheva, L. V., Shapiro, S. G., and Tanchich, A., Elastic Scattering of Slow Electrons by Atoms, Sov. Phys. JETP **41**, 1012-1016 (1976).
- 8153 Johnson, L. P., and Morrison, J. D., Double Ionization to Low-Lying States of the Doubly-Charged Rare Gases, Int. J. Mass Spectrom. Ion Phys. **18**, 355-366 (1975).
- 8154 Mohlmann, G. R., Beenakker, C. I. M., and De Heer, F. J., The Rotational Excitation and Population Distribution of $OH(A^2\Sigma^+)$ Produced by Electron Impact on Water, Chem. Phys. **13**, 375-385 (1976).
- 8155 Fryar, J., and McConkey, J. W., Analysis of the Ejected-Electron Spectra of Ar Following Controlled Electron Impact, J. Phys. B **9**, 619-629 (1976).
- 8156 Krotkov, R., Coherent Excitation of the $n = 3$ States in Hydrogen, Phys. Rev. A **12**, 1793-1800 (1975).
- 8157 Selim, E. T. M., and El-Kholy, S. B., Mass Spectrometric Ionization and Dissociation of Methane, Indian J. Pure Appl. Phys. **13**, 233-239 (1975).
- 8158 Koppe, V. T., Danilevskii, N. P., and Koval, A. G., Electron-Impact Excitation of N_2O Molecules, Opt. Spectrosc. (USSR) **39**, 447-448 (1975).

- 8177 Radchenko, R. V., Shtoi, A. G., and Zelskii, A. S., Determination of the Directed Part of the Electron Energy Distribution Function in a Helium Discharge, *Sov. Phys. Tech. Phys.* **20**, 1394-1396 (1976).
- 8178 Kamal, A. N., Richardson, J. E., and Teshima, R., e-H and e-He Elastic Scattering in the Blankenbecler-Goldberger Approximation, *J. Phys. B* **9**, 923-932 (1976).
- 8179 Schneider, B. I., and Hay, P. J., Elastic Scattering of Electrons from F_2 , *J. Phys. B* **9**, L165-L167 (1976).
- 8180 Schneider, B. I., and Hay, P. J., Elastic Scattering of Electrons from F_2 : An R-Matrix Calculation, *Phys. Rev. A* **13**, 2049-2056 (1976).
- 8181 Foster, G., and Williamson Jr., W., Eikonal Exchange Amplitudes, *Phys. Rev. A* **13**, 2023-2027 (1976).
- 8182 Geltman, S., Applications of Pseudo-State Expansions, (In) *The Physics of Electronic and Atomic Collisions: Proceedings of the VIIIth International Conference on the Physics of Electronic and Atomic Collisions* (Amsterdam, The Netherlands, 1971) North-Holland Publishers, Amsterdam, 216-231 (1972).
- 8183 Lindau, I., Pianetta, P., and Spicer, W. E., The Energy Dependence of the 4d Photoionization Cross-Section of In and Sb, *Phys. Lett. A* **57**, 225-226 (1976).
- 8184 West, J. B., and Marr, G. V., The Absolute Photoionization Cross Sections of Helium, Neon, Argon and Krypton in the Extreme Vacuum Ultraviolet Region of the Spectrum, *Proc. R. Soc. London Ser. A* **349**, 397-421 (1976).
- 8185 Feldmann, D., Infra Red Photodetachment Threshold Measurements: Li^- and P^- , *Z. Phys. A* **277**, 19-25 (1976).
- 8186 Farnoux, F. C., and Lamoureux, M., Photoionization of Some Neutral Atoms and Their Ions, *J. Phys. B* **9**, 897-909 (1976).
- 8192 Finn, T. G., and Doering, J. P., Measurement of the 13 to 100 eV Electron Impact Excitation Cross Section for the $X^1\Sigma_g^+ \rightarrow a^1\Pi_g$ Transition in N_2 , *J. Chem. Phys.* **64**, 4490-4494 (1976).
- 8193 Das, J. N., and Rudge, M. R. H., A Calculation of e[±]-H p-Wave Elastic Scattering Phaseshifts, *J. Phys. B* **9**, L131-L134 (1976).
- 8194 Rai Dastidar, K., and Rai Dastidar, T. K., Electron Exchange Scattering: Dissociation of the HeH^+ Ion through Singlet-Triplet Transitions, *J. Phys. B* **9**, 1163-1169 (1976).
- 8195 Brandt, M. A., Truhlar, D. G., and Van-Catledge, F. A., Electron Scattering by Nitrogen Molecules: Theory and Application to Elastic Scattering and Rotational Excitation at 30-75 eV, *J. Chem. Phys.* **64**, 4957-4967 (1976).
- 8196 Paikeday, J. M., Potential Model for the Elastic Scattering of Electrons by Helium at Intermediate Energies, *J. Chem. Phys.* **65**, 397-407 (1976).
- 8197 Bransden, B. H., and Winters, K. H., The Use of Second-Order Potentials in the Theory of Scattering of Charged Particles by Atoms. X. Electron Impact Excitation of the Helium 2¹P Magnetic Substates, *J. Phys. B* **9**, 1115-1120 (1976).
- 8198 Ajello, J. M., Huntress Jr., W. T., and Rayermann, P. A., Photoionization Mass Spectrometer Study of $CFCl_3$, CF_2Cl_2 , and CF_3Cl , *J. Chem. Phys.* **64**, 4746-4754 (1976).
- 8199 Van Raan, A. F. J., Baum, G., and Raith, W., One- and Two-Photon Production of Very Highly Excited States of Caesium, *J. Phys. B* **9**, L173-L176 (1976).
- 8200 Kirby-Docken, K., Cerjan, C. J., and Dalgarno, A., Oscillator Strengths and Photodissociation Cross Sections for Li_2^+ and Na_2^+ , *Chem. Phys. Lett.* **40**, 205-209 (1976).
- 8238 Felden, M. M., and Felden, M. A., Study of the Discrepancy Between "Prior" and "Post" Approximations in Quantum Calculations of the e-H Excitation Cross Sections by the Correlations Method, *Phys. Rev. A* **4**, 1476-1481 (1971).
- 8239 McFarland, R. H., Cause of the Observed Polarization of Electron-Induced Radiation from Helium, *Phys. Rev. Lett.* **10**, 397-398 (1963).
- 8240 Chandra, S., Excitation Cross Sections of Hydrogen by Electron Impact, *Acta Cienc. Indica* **1**, 51-52 (1974).
- 8241 Pai, M., Hewson, P., Vogt, E., and Schrader, D. M., On Positron-Helium Elastic Scattering, *Phys. Lett. A* **56**, 169-172 (1976).
- 8250 Jacobs, V. L., Bhatia, A. K., and Temkin, A., Continuous Ultraviolet Absorption into Double-Excited States of H^- , *Astrophys. J.* **200**, 239-243 (1975).
- 8251 Mandelbaum, D., and Feldman, P. D., Electron Impact Excitation of the Meinel Band System of N_2^+ , *J. Chem. Phys.* **65**, 672-677 (1976).
- 8252 Korotkov, A. I., Gurev, Yu. S., and Kazakov, S. M., Measurement of Relative Effective Cross Sections for Collisions of the Second Kind of $Cd(5^1P_1)$ Atoms with Slow Electrons, *Opt. Spectrosc. (USSR)* **39**, 590-593 (1975).
- 8253 Bogdanova, I. P., Frish, S. F., and Yakovleva, V. I., Luminescence of Molecular Bands on Excitation of Helium with an Electron Beam, *Opt. Spectrosc. (USSR)* **39**, 674 (1975).
- 8254 Weatherford, C. A., A Calculation of the 1S-2S Transition in He^+ Induced by Electron Impact, *J. Phys. B* **9**, L135-L139 (1976).
- 8255 Banks, D., Barnes, K. S., and Wilson, J. M., Recent Classical Three-Body p-H Ionization and Charge-Transfer Cross Sections, *J. Phys. B* **9**, L141-L144 (1976).
- 8256 Miller, T. M., Ling, J. H., Saxon, R. P., and Moseley, J. T., Absolute Total Cross Sections for the Photodissociation of Ar_2^+ , Kr_2^+ , Xe_2^+ , KrN_2^+ , and KrN^+ from 565 to 695 nm, *Phys. Rev. A* **13**, 2171-2177 (1976).
- 8257 Carlsten, J. L., and Szoke, A., Spectral Resolution of Near-Resonant Rayleigh Scattering and Collision-Induced Resonance Fluorescence, *Phys. Rev. Lett.* **36**, 667-670 (1976).
- 8258 Klyucharev, A. N., and Sepman, V. Yu., Two-Stage Photoionization of Rubidium, *Opt. Spectrosc. (USSR)* **38**, 712-713 (1975).
- 8266 Khayrallah, G. A., Electron Impact Dissociation of Molecular Hydrogen and Deuterium: Production of Atomic Hydrogen and Deuterium α , β , and γ Balmer Lines, *Phys. Rev. A* **13**, 1989-2003 (1976).
- 8267 Pichou, F., Huetz, A., Joyez, G., Landau, M., and Mazeau, J., Electron Impact Excitation of Helium: Absolute Differential Cross Sections of the $n = 2$ and 3^1S States from Threshold to 3.6 eV Above, *J. Phys. B* **9**, 933-944 (1976).
- 8268 Narain, U., and Jain, N. K., Electron Detachment Cross Sections of H^- , *J. Phys. B* **9**, 917-921 (1976).
- 8269 Rudge, M. R. H., Trajmar, S., and Williams, W., Electron Scattering by Highly Polar Molecules. I. KI , *Phys. Rev. A* **13**, 2074-2086 (1976).
- 8270 Roberts, M. J., Differential Cross Sections for the Excitation of the $n = 2$ Level of Atomic Hydrogen by Electron Impact in the Classical-Path T-Matrix Approximation, *J. Phys. B* **9**, 1293-1299 (1976).
- 8271 Moores, D. L., The Scattering of Electrons by Potassium Atoms, *J. Phys. B* **9**, 1329-1349 (1976).
- 8272 Van Wyngaarden, W. L., and Henry, R. J. W., Excitation of $N V$ by Electron Impact, *J. Phys. B* **9**, 1461-1469 (1976).
- 8273 Bransden, B. H., McDowell, M. R. C., Noble, C. J., and Scott, T., Equivalent Exchange Potentials in Electron Scattering, *J. Phys. B* **9**, 1301-1317 (1976).
- 8274 Dixon, A. J., McCarthy, I. E., and Weigold, E., Excitation of the $n = 2$ States of He^+ in the Ionization of Helium, *J. Phys. B* **9**, L195-L198 (1976).
- 8275 Chandra, N., and Temkin, A., Hybrid Theory Calculation of Simultaneous Vibration-Rotation Excitation in e- N_2 Scattering, *Phys. Rev. A* **14**, 507-511 (1976).

- 8276 Tambe, B. R., and Henry, R. J. W., Differential Cross Sections for Low-Energy Electron Scattering by Atomic Oxygen, *Phys. Rev. A* **14**, 512-514 (1976).
- 8277 Foster, G., and Williamson Jr., W., Positron-Impact $1s \rightarrow 2s$ Excitation of Atomic Hydrogen in the Eikonal Approximation, *Phys. Rev. A* **14**, 500-501 (1976).
- 8283 Estler, R. C., and Doering, J. P., High Energy-Resolution Studies of Electron Impact Optical Excitation Functions. II. The First Positive System of N_2 , *J. Chem. Phys.* **65**, 1406-1413 (1976).
- 8284 Ambartzumian, R. V., Gorokhov, Yu. A., Letokhov, V. S., Makarov, G. N., and Puresky, A. A., Isotope-Selective Dissociation of CCl_4 Molecule by Excitation of Composite Vibrational Bands by Intense Infrared Field, *Phys. Lett. A* **56**, 183-185 (1976).
- 8295 Narain, U., Cross Section for $Li^+ + e \rightarrow Li^{2+} + 2e$, *Acta Cienc. Indica* **1**, 45-46 (1974).
- 8296 Robbins, D. E., Photodissociation of Methyl Chloride and Methyl Bromide in the Atmosphere, *Geophys. Res. Lett.* **3**, 213-216 (1976).
- 8297 Debies, T. P., and Rabalais, J. W., Calculated Photoionization Cross-Sections and Angular Distributions for the Isoelectronic Series Ne, HF, H_2O , NH_3 , and CH_4 , *J. Am. Chem. Soc.* **97**, 487-492 (1975).
- 8306 Pindzola, M. S., and Kelly, H. P., Free-Free Radiative Absorption Coefficient for the Negative Argon Ion, *Phys. Rev. A* **14**, 204-210 (1976).
- 8312 Chan, F. T., and Chang, C. H., Glauber e^- -Li Elastic Scattering Amplitude, *Phys. Rev. A* **14**, 189-192 (1976).
- 8313 Brandsen, B. H., and Noble, C. J., Electron Impact Excitation of Atomic Hydrogen and Hydrogenic Ions, *J. Phys. B* **9**, 1507-1517 (1976).
- 8314 Riley, M. E., and Truhlar, D. G., Effects of the Pauli Principle on Electron Scattering by Open-Shell Targets, *J. Chem. Phys.* **65**, 792-800 (1976).
- 8315 Williams, J. F., The 2S and 2P State Excitation of Atomic Hydrogen by Electron Impact, *J. Phys. B* **9**, 1519-1527 (1976).
- 8316 Williams, W., Trajmar, S., and Bozins, D. G., Electron Scattering from Li at 5.4, 10, 20 and 60 eV Impact Energies, *J. Phys. B* **9**, 1529-1536 (1976).
- 8317 Jain, D. K., and Khare, S. P., Ionizing Collisions of Electrons with CO_2 , CO, H_2O , CH_4 and NH_3 , *J. Phys. B* **9**, 1429-1438 (1976).
- 8318 Drachman, R. J., Omidvar, K., and McGuire, J. H., Differential Cross Section for Positronium Formation in Positron-Atomic-Hydrogen Collisions, *Phys. Rev. A* **14**, 100-103 (1976).
- 8319 Mandl, A., Electron Photodetachment Cross Sections of Cl $^-$ and Br $^-$, *Phys. Rev. A* **14**, 345-348 (1976).
- 8320 Aymar, M., Luc-Koenig, E., and Farnoux, F. C., Theoretical Investigation on Photoionization from Rydberg States of Lithium, Sodium and Potassium, *J. Phys. B* **9**, 1279-1291 (1976).
- 8321 Starr, W. L., Absorption Cross Sections of Some Atmospheric Molecules for Resonantly Scattered O I 1304 Å Radiation, *J. Geophys. Res.* **81**, 3363-3367 (1976).
- 8322 Houston, P. L., and Moore, C. B., Formaldehyde Photochemistry: Appearance Rate, Vibrational Relaxation, and Energy Distribution of the CO Product, *J. Chem. Phys.* **65**, 757-770 (1976).
- 8323 Campbell, J. D., Hancock, G., Halpern, J. B., and Welge, K. H., Dissociation of NH_3 to Electronic Ground-State Fragments by High-Intensity CO_2 Laser Radiation, *Opt. Commun.* **17**, 38-42 (1976).
- 8330 Roy, A. C., and Sil, N. C., Excitation of $^1P(2p)^2$ State of Helium by Electron Impact, *Phys. Rev. A* **14**, 68-75 (1976).
- 8331 Parlant, G., and Fiquet-Fayard, F., The $O_2^- \ ^2\Pi_g$ Resonance: Theoretical Analysis of Electron Scattering Data, *J. Phys. B* **9**, 1617-1628 (1976).
- 8332 Callaway, J., Polarized Orbital Methods, *Comput. Phys. Commun.* **6**, 265-274 (1974).
- 8333 Burke, P. G., The R-Matrix Method in Atomic Physics, *Comput. Phys. Commun.* **6**, 288-302 (1974).
- 8334 Thomas, L. D., Yarlagaadda, B. S., Csanak, G., and Taylor, H. S., Analytical and Numerical Procedures in the Application of Many-Body Green's Function Methods to Electron-Atom Scattering Problems, *Comput. Phys. Commun.* **6**, 316-330 (1974).
- 8335 Nesbet, R. K., Matrix Variational Method, *Comput. Phys. Commun.* **6**, 275-287 (1974).
- 8336 Miller, K. J., Variational Principle for Scattering with Bounds on the Phase Shift, *Phys. Rev. A* **3**, 607-612 (1971).
- 8337 Seaton, M. J., Close Coupling, *Comput. Phys. Commun.* **6**, 247-256 (1974).
- 8338 McCulloh, K. E., and Dibeler, V. H., Enthalpy of Formation of Methyl and Methylene Radicals of Photoionization Studies of Methane and Ketene, *J. Chem. Phys.* **64**, 4445-4450 (1976).
- 8339 Carlsten, J. L., and Szoke, A., Collisional Redistribution of Near-Resonant Scattered Light in Sr Vapour, *J. Phys. B* **9**, 1231-1235 (1976).
- 8352 Hood, S. T., Hamnett, A., and Brion, C. E., An $(e,2e)$ Study of Ammonia: Binding Energies and Momentum Distributions of Valence Electrons, *Chem. Phys. Lett.* **39**, 252-256 (1976).
- 8353 Weigold, E., Dey, S., Dixon, A. J., McCarthy, I. E., and Teubner, P. J. O., $(e,2e)$ Spectroscopy of Methane, *Chem. Phys. Lett.* **41**, 21-24 (1976).
- 8354 Hubin-Franskin, M.-J., Katihabwa, J., and Collin, J. E., Dissociative Electron Attachment for the Carbonyl Sulphide Molecule in the Gas Phase. Heat of Formation of the CS Radical, *Int. J. Mass Spectrom. Ion Phys.* **20**, 285-293 (1976).
- 8355 Mark, T. D., and Egger, F., Cross-Section for Single Ionization of H_2O and D_2O by Electron Impact from Threshold up to 170 eV, *Int. J. Mass Spectrom. Ion Phys.* **20**, 89-99 (1976).
- 8356 Fabrikant, I. I., Electron Scattering by Rubidium Below the Excitation Threshold, *Phys. Lett. A* **58**, 21-22 (1976).
- 8357 Shpenik, O. B., Souter, V. V., Zavlilopulo, A. N., Zapesochnyi, I. P., and Kontrosh, E. E., Investigation of Resonances in the Total Cross Sections for Excitation of Mercury Atoms by Slow Monoenergetic Electrons, *Sov. Phys. JETP* **42**, 23-28 (1976).
- 8358 Hilton, P. R., Nordholm, S., and Hush, N. S., Molecular Photoionization Cross Sections Calculated by an Effective Plane Wave Method, *Chem. Phys.* **15**, 345-361 (1976).
- 8359 Ambartzumian, R. V., Dolzhikov, V. S., Letokhov, V. S., Ryabov, E. A., and Chekalin, N. V., Investigation of the Dissociation of BCl_3 Molecules in the Field of an Intense CO_2 Laser Pulse, *Sov. Phys. JETP* **42**, 36-41 (1976).
- 8365 Onda, K., Low-Energy Electron Scattering from Strongly Polar Molecules. II. Adiabatic Treatments Using Dipole Angle Functions, *J. Phys. Soc. Jpn.* **40**, 1437-1445 (1976).
- 8366 Brandus, L., A Method for the Calculation of Electronic Excitation Cross Sections, *Rev. Roum. Phys.* **21**, 347-357 (1976).
- 8367 Miyazaki, K., Watanabe, T., and Fukuda, K., Dispersion and Absorption Studies on the Doubly-Excited $5p^2 \ ^3P_{0,1,2}$ States of CdI, *J. Phys. Soc. Jpn.* **40**, 233-238 (1976).
- 8378 Beaty, E. C., Measurements of the Energy and Angular Distribution of Secondary Electrons, *Radiat. Res.* **64**, 70-79 (1975).

- 8379 Kim, Y.-K., Energy Distribution of Secondary Electrons, *Radiat. Res.* **64**, 96-105 (1975).
- 8380 Brion, C. E., "Photoelectron" Spectroscopy by Electron Impact: Coincidence Studies of Scattered and Ejected Electrons, *Radiat. Res.* **64**, 37-52 (1975).
- 8381 Ottley, T. W., and Ross, K. J., Ejected Electron Spectrum of Sodium Autoionizing Levels Obtained by Electron Impact Excitation at 500 eV Incident Energy, *Phys. Lett. A* **56**, 270-272 (1976).
- 8382 Watson, C. E., Dulock Jr., V. A., Stolarski, R. S., and Green, A. E. S., Electron Impact Cross Sections for Atmospheric Species. 3. Molecular Oxygen, *J. Geophys. Res.* **72**, 3961-3966 (1967).
- 8383 Jusick, A. T., Watson, C. E., Peterson, L. R., and Green, A. E. S., Electron Impact Cross Sections for Atmospheric Species. 1. Helium, *J. Geophys. Res.* **72**, 3943-3951 (1967).
- 8384 Stolarski, R. S., Dulock Jr., V. A., Watson, C. E., and Green, A. E. S., Electron Impact Cross Sections for Atmospheric Species. 2. Molecular Nitrogen, *J. Geophys. Res.* **72**, 3953-3960 (1967).
- 8385 Hamnett, A., Stoll, W., Branton, G., Brion, C. E., and Van Der Wiel, M. J., A Kinematic and Experimental Investigation of the (e,2e) Simulation of Photoelectron Spectroscopy, *J. Phys. B* **9**, 945-957 (1976).
- 8395 Veillette, P., and Marchand, P., Detection Optique de Niveaux Hautement Excites du Ne Produits par Impact Electronique, *Can. J. Phys.* **54**, 1208-1215 (1976).
- 8396 Amusia, M. Ya., Ivanov, V. K., and Sheinerman, S. A., Inter-Shell Correlations in the Inelastic Scattering of Fast Electrons of the Outer Subshells in Ar and Xe, *J. Phys. B* **9**, 1537-1553 (1976).
- 8397 Johnston, H. S., and Selwyn, G. S., New Cross Sections for the Absorption of Near Ultraviolet Radiation by Nitrous Oxide (N_2O), *Geophys. Res. Lett.* **2**, 549-551 (1975).
- 8398 Kockarts, G., Absorption and Photodissociation in the Schumann-Runge Bands of Molecular Oxygen in the Terrestrial Atmosphere, *Planet. Space Sci.* **24**, 589-604 (1976).
- 8399 Amusia, M. Ya., and Cherepkov, N. A., Many-Electron Correlations in Scattering Processes, *Case Stud. At. Phys.* **5**, 47-179 (1975).
- 8402 De Heer, F. J., Wagenaar, R. W., Blaauw, H. J., and Tip, A., A Dispersion Relation for Forward Scattering, *J. Phys. B* **9**, L269-L274 (1976).
- 8411 Balkis, T., Gaines, A. F., Ozgen, G., Ozgen, I. T., and Flowers, M. C., Ionisation of Hydrogen Sulphide, Selenide and Telluride by Electron Impact, *J. Chem. Soc. Faraday Trans. 2* **72**, 524-527 (1976).
- 8412 Mirza, M. Y., On the Cross Section of O^- Formation in e- O_2 Collisions Between 9 and 17 eV, *J. Phys. Chem.* **80**, 1641-1642 (1976).
- 8413 Dehmer, P. M., and Chupka, W. A., Very High Resolution Study of Photoabsorption, Photoionization, and Predissociation in H_2 , *J. Chem. Phys.* **65**, 2243-2273 (1976).
- 8414 Ng, C. Y., Mahan, B. H., and Lee, Y. T., Photoionization with Molecular Beams. I. Autoionization Structure of Nitric Oxide near the Threshold, *J. Chem. Phys.* **65**, 1956-1961 (1976).
- 8436 Hayashi, S., and Kuchitsu, K., Elastic Scattering of Electrons by Molecules at Intermediate Energies. Calculation of Double Scattering Effects in N_2 and P_4 , *Chem. Phys. Lett.* **41**, 575-579 (1976).
- 8437 Morrison, M. A., Collins, L. A., and Lane, N. F., Theoretical Study of Low-Energy Electron- CO_2 Scattering, *Chem. Phys. Lett.* **42**, 356-360 (1976).
- 8449 Rahman, N. K., and Faisal, F. H. M., Excitation of Metastable Hydrogen by Simultaneous Collision with Electrons and Photons, *J. Phys. B* **9**, L275-L277 (1976).
- 8450 Abouaf, R., and Fiquet-Fayard, F., Dissociative Attachment in SO_2 and OCS : Evidence for Vibrational Excitation of the SO , O_2 and CO Fragments, *J. Phys. B* **9**, L323-L337 (1976).
- 8451 Duweke, M., Kirchner, N., Reichert, E., and Schon, S., Spin Polarization in Low-Energy Electron Scattering from Mercury, *J. Phys. B* **9**, 1915-1921 (1976).
- 8452 Kabachnik, N. M., and Sazhina, I. P., Angular Distribution and Polarization of Photoelectrons in the Region of Resonances, *J. Phys. B* **9**, 1681-1697 (1976).
- 8453 Carter, S. L., and Kelly, H. P., Double Photoionization Cross Section of ^3P Carbon, *J. Phys. B* **9**, 1887-1897 (1976).
- 8461 Chen, S. T., and Gallagher, A., Excitation of the Ba and Ba^+ Resonance Lines by Electron Impact on Ba Atoms, *Phys. Rev. A* **14**, 593-601 (1976).
- 8462 Hood, S. T., Hamnett, A., and Brion, C. E., The Assignment of the Ionization Potentials of Formaldehyde by an (e,2e) Experiment, *Chem. Phys. Lett.* **41**, 428-430 (1976).
- 8463 Shimon, L. L., Vukstich, V. S., Goldovskii, V. L., Zapesochnyi, I. P., and Erdevdi, N. M., Electron-Impact Excitation of Thallium Spectral Lines in the Vacuum Spectral Region, *Opt. Spectrosc. (USSR)* **40**, 367-369 (1976).
- 8464 Markin, A. P., Calculation of the Cross Section for Photoionization of π -Electron Systems in the Second Born Approximation, *Opt. Spectrosc. (USSR)* **40**, 379-381 (1976).
- 8479 Mentall, J. E., and Morgan, H. D., Electron Impact Excitation of Argon in the Extreme Vacuum Ultraviolet, *Phys. Rev. A* **14**, 954-960 (1976).
- 8480 Das, A. K., Maiti, N., and Sil, N. C., 2^1S Excitation of Li^+ by Electron Impact, *Phys. Lett. A* **58**, 169-172 (1976).
- 8481 Hanson, R. K., Monat, J. P., and Kruger, C. H., Absorption of CO Laser Radiation by NO , *J. Quant. Spectrosc. Radiat. Transfer* **16**, 705-713 (1976).
- 8482 Popp, H.-P., and Kruse, S., Negative Hydrogen Ion Detachment Cross Section from Radiation Measurements on a PLTE-Arc, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 683-688 (1976).
- 8483 Beyer, R. A., and Vanderhoff, J. A., Cross Section Measurements for Photodetachment or Photodissociation of Ions Produced in Gaseous Mixtures of O_2 , CO_2 , and H_2O , *J. Chem. Phys.* **65**, 2313-2321 (1976).
- 8490 Haasz, A. A., Effective Cross Sections for Excitation of Atomic Oxygen by Electron Impact, *J. Chem. Phys.* **65**, 1642-1649 (1976).
- 8491 McGowan, J. W., Caudano, R., and Keyser, C. J., Detailed Study of Recombination: The Importance of the Rydberg State in Electron- H_2^+ Recombination, *Phys. Rev. Lett.* **36**, 1447-1450 (1976).
- 8492 Van Veen, E. H., Low-Energy Electron-Impact Spectroscopy on Ethylene, *Chem. Phys. Lett.* **41**, 540-543 (1976).
- 8493 Mitra, C., and Sil, N. C., Excitation of Hydrogenlike Ions by Electron Impact, *Phys. Rev. A* **14**, 1009-1014 (1976).
- 8494 Chutjian, A., Experimental-Theoretical Comparisons of $1^1\text{S} \rightarrow 3^1\text{P}$ Differential Magnetic Sublevel Cross Sections for Electron-Helium Scattering at 80 and 100 eV, *J. Phys. B* **9**, 1749-1756 (1976).
- 8495 Ivanov, V. S., and Vilesov, F. I., Near-Threshold Photoionization Processes in Methyl Halides, *Opt. Spectrosc. (USSR)* **39**, 487-490 (1975).
- 8503 Kivel, B., Bremsstrahlung in Air, *J. Quant. Spectrosc. Radiat. Transfer* **7**, 51-60 (1967).
- 8504 Breene Jr., R. G., and Nardone, M. C., Free-Free Continuum of Oxygen, *J. Opt. Soc. Am.* **50**, 1111-1114 (1960).
- 8505 Kivel, B., Neutral Atom Bremsstrahlung, *J. Quant. Spectrosc. Radiat. Transfer* **7**, 27-49 (1967).

- 8506 Kasyanov, V., and Starostin, A., On the Theory of Bremsstrahlung of Slow Electrons on Atoms, *Sov. Phys. JETP* **21**, 193-198 (1965).
- 8507 John, T. L., and Williams, R. J., Resonance in the Infra-Red Spectrum of N₂, *Phys. Lett. A* **58**, 375-377 (1976).
- 8508 Buimistrov, V. M., and Trakhtenberg, L. I., Bremsstrahlung Cross Section in Scattering of an Electron by a Hydrogen Atom, *Sov. Phys. JETP* **42**, 54-57 (1976).
- 8531 Lee, L. C., Carlson, R. W., and Judge, D. L., The Absorption Cross Sections of H₂ and D₂ from 180 to 780 Å, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 873-877 (1976).
- 8532 Moskvina, Yu. V., Cross-Section for Photo-Detachment of the Negative Nitrogen Ion, *Opt. Spectrosc. (USSR)* **28**, 356-357 (1970).
- 8558 Borie, E., Maximon, L. C., and Olsen, H., Molecular Coherence Effects in Radiation Processes: Bremsstrahlung, *Phys. Rev. A* **2**, 1443-1449 (1970).
- 8559 Kruger, H., and Schulz, M., Laser-Induced Free-Free Electronic Transitions near a Resonance, *J. Phys. B* **9**, 1899-1910 (1976).
- 8560 Mjølness, R. C., and Ruppel, H. M., Contribution of Inverse Neutral Bremsstrahlung to the Absorption Coefficient of Heated Air, *J. Quant. Spectrosc. Radiat. Transfer* **7**, 423-427 (1967).
- 8561 Van Veen, E. H., and Plantenga, F. L., Low-Energy Electron-Impact Excitation Spectra of Acetylene, *Chem. Phys. Lett.* **38**, 493-497 (1976).
- 8588 Van Ittersum, T., Heideman, H. G. M., Nienhuis, G., and Prins, J., Post-Collision Interaction in the Excitation of Helium by Electrons, *J. Phys. B* **9**, 1713-1724 (1976).
- 8589 Bhattacharyya, P. K., and Ghosh, A. S., Application of the Eikonal Amplitude to Rotational Excitations of Diatomic Molecules by Electron Impact, *Phys. Rev. A* **14**, 1587-1590 (1976).
- 8590 Calhoun, R. V., Madison, D. H., and Shelton, W. N., Excitation of the $n = 2$ State of Atomic Hydrogen by Electron Impact in the Distorted-Wave Approximation, *Phys. Rev. A* **14**, 1380-1387 (1976).
- 8591 Henry, R. J. W., and Matese, J. J., Excitation of He⁺ by Electron Impact, *Phys. Rev. A* **14**, 1368-1370 (1976).
- 8592 McGuire, E. J., Excitation of Atomic Oxygen in the Born Approximation, *Phys. Rev. A* **14**, 1576-1578 (1976).
- 8593 Bass, A. M., Ledford Jr., A. E., and Laufer, A. H., Extinction Coefficients of NO₂ and N₂O₂, *J. Res. Nat. Bur. Stand. Sect. A* **80**, 143-166 (1976).
- 8613 Tripathi, D. N., Cross Sections for Double Ionization of Alkaline Earth Atoms (Be, Mg, Ca, Sr, and Ba) Due to Electron Impact, *Proc. Indian Nat. Sci. Acad. Part A* **40**, 34-40 (1974).
- 8614 Saha, B. C., Sarkar, K., and Ghosh, A. S., Eikonal Approximation in Elastic Atomic Scattering, *Proc. Indian Nat. Sci. Acad. Part A* **39**, 382-396 (1973).
- 8615 Padalia, B. D., and Nayak, R. M., Electron Impact Ionization Cross Section of Atomic Oxygen, *Proc. Indian Nat. Sci. Acad. Part A* **39**, 409-413 (1973).
- 8616 Khare, S. P., and Narain, U., Total Ionization Cross Sections of He⁺ Ions Due to Electron Impact, *Proc. Indian Nat. Sci. Acad. Part A* **39**, 414-418 (1973).
- 8617 Weatherford, C. A., Henry, R. J. W., and Bruels, M. C., An Effective Polarization Potential for Low-Energy Electron-H₂ Collisions, *Proc. Indian Nat. Sci. Acad. Part A* **39**, 432-437 (1973).
- 8618 Truhlar, D. G., Brandt, M. A., Chutjian, A., Srivastava, S. K., and Trajmar, S., Electron Scattering by N₂ at 5 and 10 eV: Rotational-Vibrational Close-Coupling Calculations and Crossed Beam Studies of Vibrational Excitation, *J. Chem. Phys.* **65**, 2962-2969 (1976).
- 8619 Drukarev, G. F., and Berezina, N. B., Energy Dependence of the Cross Section for Elastic Scattering of Slow Electrons by Positive Ions at 180°, *Sov. Phys. JETP* **42**, 423-424 (1976).
- 8620 Truhlar, D. G., and Brandt, M. A., Close-Coupling Calculations of Differential Cross Sections for Elastic Scattering and Rotational Excitation of Hydrogen Molecules by Electrons at 10 and 40 eV, *J. Chem. Phys.* **65**, 3092-3101 (1976).
- 8621 Brunt, J. N. H., King, G. C., and Read, F. H., A Study of Resonance Structure in Neon, Argon, Krypton and Xenon Using Metastable Excitation by Electron Impact with High Energy Resolution, *J. Phys. B* **9**, 2195-2207 (1976).
- 8622 Page, B. A. P., Numerical Determination of Elastic Positron- and Electron-Atom Scattering Phaseshifts, *J. Phys. B* **9**, 2221-2233 (1976).
- 8623 Scott, T., and McDowell, M. R. C., Electron Impact Excitation of the $n^1P(n = 2-5)$ and 2^1P States of Helium at Intermediate Energies, *J. Phys. B* **9**, 2235-2254 (1976).
- 8624 Pandey, R. A., Tripathi, D. N., and Upadhyay, K. N., Photoionization Cross Sections of Hydrogen Molecule in the AMO-LCAO Approximation, *Proc. Indian Nat. Sci. Acad. Part A* **40**, 29-33 (1974).
- 8625 Phillips, E., Lee, L. C., and Judge, D. L., CO($d^1\Delta$, $\rightarrow$ $X^1\Sigma^+$) Fluorescence from Photodissociation of CO₂ by 923 Å Photons, *J. Chem. Phys.* **65**, 3118-3122 (1976).
- 8638 Wheeler, J. A., and Wildt, R., The Absorption Coefficient of the Free-Free Transitions of the Negative Hydrogen Ion, *Astrophys. J.* **95**, 281-287 (1942).
- 8639 Benetti, P., Cubeddu, R., Sacchi, C. A., Svelto, O., and Zaraga, F., Fluorescence from Gaseous UF₆ Excited by a Near-UV Dye Laser, *Chem. Phys. Lett.* **40**, 240-242 (1976).
- 8640 Andreoni, A., and Bucher, H., Fluorescence of Uraniumhexafluoride in the Gas Phase, *Chem. Phys. Lett.* **40**, 237-239 (1976).
- 8641 Srivastava, S. K., Cartwright, D. C., Trajmar, S., Chutjian, A., and Williams, W. X., Photoabsorption Spectrum of UF₆ by Electron Impact, *J. Chem. Phys.* **65**, 208-211 (1976).
- 8642 Ambartsumian, R. V., Gorokhov, Yu. A., Letokhov, V. S., Makarov, G. N., Puretsky, A. A., and Furzikov, N. P., Selectivity of Dissociation of Polyatomic Molecules in a Two-Frequency IR Laser Field, *JETP Lett.* **23**, 194-197 (1976).
- 8643 Moseley, J. T., Cosby, P. C., and Peterson, J. R., Photodissociation Spectroscopy of CO₃⁻, *J. Chem. Phys.* **65**, 2512-2517 (1976).
- 8661 Mandal, P., Basu, D., and Ghosh, A. S., Positron-Helium Scattering Including Polarization Effects, *J. Phys. B* **9**, 2633-2642 (1976).
- 8662 Dyachkov, L. G., Kobzev, G. A., and Norman, G. E., Effect of Resonances in Elastic Scattering on the Bremsstrahlung of Electrons in an Atomic Field, *Sov. Phys. JETP* **38**, 697-700 (1975).
- 8692 Zapesochnyi, I. P., Zhukov, I. G., and Feltsan, P. V., Ultrasoft X-Ray Study of the s-Ionization Mechanism for Noble Gases, *Sov. Phys. JETP* **38**, 675-679 (1974).
- 8693 Frost, D. C., Lee, S. T., McDowell, C. A., and Westwood, N. P. C., Photoelectron Spectroscopic Studies of Some Nitrosyl and Nitryl Halides and Nitric Acid, *J. Electron Spectrosc. Relat. Phenom.* **7**, 331-347 (1975).
- 8694 Chau, F. T., and McDowell, C. A., Photoelectron Spectra of Fluorotribromomethane and Fluorotrichloromethane, *J. Electron Spectrosc. Relat. Phenom.* **6**, 357-363 (1975).
- 8695 Peatman, W. B., Kasting, G. B., and Wilson, D. J., The Origin and Elimination of Spurious Peaks in Threshold Electron Photoionization Spectra, *J. Electron Spectrosc. Relat. Phenom.* **7**, 233-246 (1975).
- 8714 Avrillier, S., and Schermann, J.-P., Vibrational Excitation of SF₆ by Electron Impact, *Opt. Commun.* **19**, 87-91 (1976).

- 8715 Kuyatt, C. E., Mielczarek, S. R., and Weiss, M. J., Intensities of Infrared Transitions in N_2O and H_2CO by Electron Impact Spectroscopy, *J. Chem. Phys.* **65**, 3481-3485 (1976).
- 8716 Tweed, R. J., Gelebart, F., and Peresse, J., Autoionization by Electron Impact: Experiments on Ar, Kr and Xe, *J. Phys. B* **9**, 2643-2656 (1976).
- 8717 Alcock, G., and McConkey, J. W., Metastable Fragment Production Following Electron Impact on CO_2 , *J. Phys. B* **9**, 2127-2139 (1976).
- 8718 Rescigno, T. N., Bender, C. F., McCurdy Jr., C. W., and McKoy, V., Cross Sections for the Elastic Scattering of Low-Energy Electrons by Molecular Fluorine: An Approximate Theoretical Treatment Using Discrete Basis Functions, *J. Phys. B* **9**, 2141-2146 (1976).
- 8719 Chen, S. T., and Khayrallah, G. A., Glauber Cross Sections for Elastic Scattering of Electrons by Metastable (2^1S , 2^3S) Helium Atoms, *Phys. Rev. A* **14**, 1639-1644 (1976).
- 8720 Levin, V. G., and Pavlitchenkov, A. V., Angular Correlation for the ($e,2e$) Reaction on Methane, *Phys. Lett. A* **58**, 451-453 (1976).
- 8721 Hayashi, S., and Kuchitsu, K., A Quasi-Adiabatic Polarization Potential for Elastic Electron-Atom Scattering. Helium and Other Atoms, *Chem. Phys. Lett.* **44**, 1-4 (1976).
- 8722 Fukui, K., Hirotsu, T., Kuwata, K., and Fujita, I., Optical Excitation Function of CO by Electron Impact near Threshold, *Chem. Phys. Lett.* **44**, 13-16 (1976).
- 8723 Meron, E., Murat, K., Nachman, J., Tal, Y., and Katriel, J., Elastic Electron-Rare-Gas Atom Scattering: Application of a One-Electron Model Generated by a Partition of $1/r_{12}$, *Chem. Phys. Lett.* **44**, 350-353 (1976).
- 8724 Haasz, A. A., and De Leeuw, J. H., Effective Electron Impact Excitation Cross Sections for N_2 , O_2 , and O , *J. Geophys. Res.* **81**, 4031-4034 (1976).
- 8725 Chandra, N., and Temkin, A., Hybrid Theory Calculation of Electron- N_2 Scattering at 5 and 10 eV, *J. Chem. Phys.* **65**, 4537-4539 (1976).
- 8726 Bransden, B. H., and Noble, C. J., Differential Cross Sections for the Scattering of Electrons by Atomic Hydrogen at Intermediate Energies, *J. Phys. B* **9**, 2461-2468 (1976).
- 8727 Seng, G., and Linder, F., Vibrational Excitation of Polar Molecules by Electron Impact. II. Direct and Resonant Excitation in H_2O , *J. Phys. B* **9**, 2539-2551 (1976).
- 8728 Rohr, K., and Linder, F., Vibrational Excitation of Polar Molecules by Electron Impact. I. Threshold Resonances in HF and HCl, *J. Phys. B* **9**, 2521-2537 (1976).
- 8729 Langendam, P. J. K., Cavrila, M., Kaandorp, J. P. J., and Van Der Wiel, M. J., Resonant Free-Free Absorption by Electrons in the Field of a Neon Atom, *J. Phys. B* **9**, L453-L457 (1976).
- 8730 Andrick, D., and Langhans, L., Measurement of Free-Free Transitions in e^- -Ar Scattering, *J. Phys. B* **9**, L459-L461 (1976).
- 8731 Chu, S.-I., Collisionally Induced Hyperfine-Structure Transitions of OH, *Astrophys. J.* **206**, 640-651 (1976).
- 8732 Maiti, N., Ghosh, A. S., and Sil, N. C., e^- -He Scattering for a Wider Range of Energy, *Indian J. Phys.* **50**, 385-393 (1976).
- 8733 Fukui, K., Fujita, I., and Kuwata, K., Emission Spectra and Excitation Functions of CS_2 , NO, N_2O , and NO_2 by Low Energy Electron Impact, *Mass Spectrosc. (Japan)* **23**, 105-117 (1975).
- 8734 Barfield, W. D., Photoionization Cross-Sections and Radiative Recombination Rate Coefficients for Fe XV-XXV, *Nucl. Fusion* **15**, 1192-1194 (1975).
- 8735 Du Bois, R. D., and Rudd, M. E., Differential Cross Sections for Elastic Scattering of Electrons from Argon, Neon, Nitrogen and Carbon Monoxide, *J. Phys. B* **9**, 2657-2667 (1976).
- 8736 Chandra, S., and Narain, U., Radiative Recombination in the Helium Sequence, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 789-791 (1976).
- 8737 Kepple, P. C., and Davis, J., Atomic Parameters and Rate Coefficients for Selected Transitions in Al(XII), *J. Quant. Spectrosc. Radiat. Transfer* **16**, 993-996 (1976).
- 8738 Zapesochnyi, I. P., Kelman, V. A., Imre, A. I., Dashchenko, A. I., and Danch, F. F., Excitation of the Mg^+ , Ca^+ , Sr^+ , and Ba^+ Resonance Levels in Electron-Ion Collisions, *Sov. Phys. JETP* **42**, 989-992 (1976).
- 8739 Campbell, J. D., Hancock, G., Halpern, J. B., and Welge, K. H., Off Resonant Dissociation of NH_3 to Ground State Fragments by Pulsed CO_2 Laser Radiation, *Chem. Phys. Lett.* **44**, 404-410 (1976).
- 8740 Bodeur, S., Soft-X-Ray Photoionization Cross Sections of Molecular Oxygen, *J. Appl. Phys.* **47**, 4911-4914 (1976).
- 8741 Ng, C. Y., Trevor, D. J., Mahan, B. H., and Lee, Y. T., Photoionization Study of the Xe_2 Van Der Waals Molecule, *J. Chem. Phys.* **65**, 4327-4329 (1976).
- 8742 Hays, G. N., and Fisk, G. A., Saturable Absorption and Rotational Relaxation in CO_2 , *J. Chem. Phys.* **65**, 4554-4558 (1976).
- 8743 Hirota, F., Calculation of the Molecular Photoionization Cross Sections in the UV Region. I. Diatomic Molecules, *J. Electron Spectrosc. Relat. Phenom.* **9**, 149-167 (1976).
- 8744 Houlgate, R. G., West, J. B., Codling, K., and Marr, G. V., The Angular Distribution of the 3p Electrons and the Partial Cross Section of the 3s Electrons of Argon from Threshold to 70 eV, *J. Electron Spectrosc. Relat. Phenom.* **9**, 205-209 (1976).
- 8745 Heffington, W. M., Parks, G. E., Sulzmann, K. G. P., and Penner, S. S., High-Temperature Absorption Coefficient of Methane at 3.392μ , *J. Quant. Spectrosc. Radiat. Transfer* **16**, 839-841 (1976).
- 8769 Itikawa, Y., Low-Energy Electron Scattering from Strongly Polar Molecules. III. Close-Coupling Calculation for CSF , *J. Phys. Soc. Jpn.* **41**, 619-624 (1976).
- 8770 Mikhailov, A. A., and Pivovarov, V. A., Rate Constants for Stepwise Electron-Impact Excitation of Nitrogen Vibrational Levels, *Sov. Phys. Tech. Phys.* **20**, 668-670 (1976).
- 8771 Tsai, J.-S., Lebow, L., and Paul, D. A. L., Measurement of Total Cross Sections (e^+ ,Ne) and (e^+ ,Ar), *Can. J. Phys.* **54**, 1741-1748 (1976).
- 8772 Le Dourneuf, M., Lan, V. K., and Hibbert, A., Photoionization of Ground-State Nitrogen Atoms, *J. Phys. B* **9**, L359-L362 (1976).
- 8773 Taylor, K. T., and Burke, P. G., Photoionization of Ground-State Carbon and Oxygen Atoms, *J. Phys. B* **9**, L353-L358 (1976).
- 8774 Koyano, I., Yamada, H., and Tanaka, I., Detection of Long-Lived Excited States of N_2 by Photoionization, *Int. J. Mass Spectrom. Ion Phys.* **21**, 113-123 (1976).
- 8775 McCulloh, K. E., Energetics and Mechanisms of Fragment Ion Formation in the Photoionization of Normal and Deuterated Water and Ammonia, *Int. J. Mass Spectrom. Ion Phys.* **21**, 333-342 (1976).
- 8776 Gianturco, F. A., and Thompson, D. G., The Ramsauer-Townsend Effect in Methane, *J. Phys. B* **9**, L383-L385 (1976).
- 8779 Slavik, V. N., Kupriyanov, S. E., Perov, A. A., and Kabanov, S. P., Mass-Spectrometer Study of Metastable Autoionization States of Lithium and Potassium Atoms, *Sov. Phys. JETP* **42**, 593-594 (1976).
- 8780 Pradhan, A. K., Collision Strengths for [O II] and [S II], *Mon. Not. R. Astron. Soc.* **177**, 31-38 (1976).
- 8781 Dankwort, W., and Treffitz, E., Oscillator Strengths and Collision Strengths in Si X, *Astron. Astrophys.* **47**, 365-370

- (1976).
- 8782 Callaway, J., McDowell, M. R. C., and Morgan, L. A., Inelastic Differential Scattering of Electrons by Hydrogen Atoms from 0.75–4 Ryd: $n = 2$ States, *J. Phys. B* **9**, 2043–2051 (1976).
 - 8783 Kennerly, R. E., and Bonham, R. A., High-Resolution Pulsed Electron Beam Time-of-Flight Ejected-Electron Spectroscopy of He and Ar, *Chem. Phys. Lett.* **43**, 245–249 (1976).
 - 8784 Mohlmann, G. R., and De Heer, F. J., Emission Cross Sections of the $H_2(3p^3\Pi_u \rightarrow 2s^3\Sigma_g^-)$ Transition for Electron Impact on H_2 , *Chem. Phys. Lett.* **43**, 240–244 (1976).
 - 8785 Coggiola, M. J., Flicker, W. M., Mosher, O. A., and Kuppermann, A., Electron-Impact Spectroscopy of the Fluoroethylenes, *J. Chem. Phys.* **65**, 2655–2667 (1976).
 - 8786 Le Dourneuf, M., and Nesbet, R. K., Electron Impact Excitation of Fine-Structure Levels of Atomic Oxygen, *J. Phys. B* **9**, L241–L243 (1976).
 - 8787 Gelebart, F., Tweed, R. J., and Peresse, J., Autoionization by Electron Impact: Experiment with He, *J. Phys. B* **9**, 1739–1748 (1976).
 - 8788 Chandra, S., Mital, H. P., and Narain, U., Ionization Cross Sections and Rate Coefficients for Atoms, Ions and Molecules, *Physica (Utrecht)* **C 83**, 384–388 (1976).
 - 8789 Van Wyngaarden, W. L., and Henry, R. J. W., Excitation of $^*Ne$ VIII by Electron Impact, *Can. J. Phys.* **54**, 2019–2023 (1976).
 - 8790 Roy, D., Delage, A., and Carette, J.-D., Resonances in the Differential Electron Excitation Cross Section of Bound States of Krypton in the Autoionization Region, *J. Phys. B* **9**, 1923–1931 (1976).
 - 8791 Langhoff, P. W., Corcoran, C. T., Sims, J. S., Weinhold, F., and Glover, R. M., Moment-Theory Investigations of Photoabsorption and Dispersion Profiles in Atoms and Ions, *Phys. Rev. A* **14**, 1042–1056 (1976).
 - 8792 Uselman, W. M., and Lee, E. K. C., A Study of Nitrogen Dioxide (2^2B_2) Photodecomposition to $O(^1D)$ and $NO(^2\Pi)$ in Its Second Predissociation Region 2500–2139 Å, *J. Chem. Phys.* **65**, 1948–1955 (1976).
 - 8793 Scofield, J. H., Hartree-Slater Subshell Photoionization Cross-Sections at 1254 and 1487 eV, *J. Electron Spectrosc. Relat. Phenom.* **8**, 129–137 (1976).
 - 8869 Aashamar, K., and Hambro, L., Correlation Effects in Electron-Atom Scattering. Born Approximations, *Phys. Norv.* **8**, 75–84 (1975).
 - 8870 Rai Dastidar, K., Electron Impact Dissociation of H_2^+ Using Variationally Adjusted LCAO-Type Molecular Orbitals, *Physica (Utrecht)* **C 84**, 285–288 (1976).
 - 8871 Saha, B. C., Chaudhuri, J., and Ghosh, A. S., High-Energy Behaviour of e^-H Scattering Cross Section, *J. Phys. Soc. Jpn.* **41**, 1716–1723 (1976).
 - 8872 Samson, J. A. R., and Haddad, G. N., Average Energy Loss per Ion Pair Formation by Photon and Electron Impact on Xenon Between Threshold and 90 eV, *Radiat. Res.* **66**, 1–10 (1976).
 - 8873 Cartwright, D. C., Fiamengo, N. A., Williams, W., and Trajmar, S., Decomposition of the Photoabsorption Schumann-Runge Continuum in O_2 , *J. Phys. B* **9**, L419–L425 (1976).
 - 8913 Delage, A., and Carette, J.-D., Oscillator Strengths of Xe I Electronic Transitions Measured by Electron Spectrometry, *Phys. Rev. A* **14**, 1345–1353 (1976).
 - 8914 Davis, J., Kepple, P. C., and Blaha, M., Electron Impact Excitation Coefficients for Laboratory and Astrophysical Plasmas, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 1043–1055 (1976).
 - 8915 Mohlmann, G. R., Tsurubuchi, S., and De Heer, F. J., Excitation Cross Sections for 3s, 3p and 3d Sublevels of Atomic Hydrogen Split from Simple Molecules by High-Energy Electron Impact, *Chem. Phys.* **18**, 145–154 (1976).
 - 8916 Gien, T. T., Elastic Scattering of Electrons by Hydrogen at Intermediate Energies: A Modified Glauber Theory, *J. Phys. B* **9**, 3203–3212 (1976).
 - 8917 Phaneuf, R. A., Taylor, P. O., and Dunn, G. H., Absolute Cross Sections for Emission of 284.7-nm (Hg II) and 479.7-nm (Hg III) Radiation in Electron-Mercury-Ion Collisions, *Phys. Rev. A* **14**, 2021–2025 (1976).
 - 8918 Trajmar, S., Cartwright, D. C., and Hall, R. L., Electron Impact Excitation of the Rydberg States in O_2 in the 7–10 eV Energy-Loss Region, *J. Chem. Phys.* **65**, 5275–5279 (1976).
 - 8919 Burrow, P. D., Michejda, J. A., and Comer, J., Low-Energy Electron Scattering from Mg, Zn, Cd and Hg: Shape Resonances and Electron Affinities, *J. Phys. B* **9**, 3225–3236 (1976).
 - 8920 Hartfuss, H. J., Neumann, J., and Schneider, H. D., Intensity Ratios within the Balmer Lines $H\alpha$ and $H\beta$ After Dissociative Excitation of C_6H_6 and H_2 , *Z. Naturforsch. Teil A* **31**, 1292–1297 (1976).
 - 8921 Khayrallah, G. A., Exchange Amplitudes for Electron-Hydrogen Scattering in the Glauber Approximation, *Phys. Rev. A* **14**, 2064–2070 (1976).
 - 8922 Coleman, P. G., Griffith, T. C., Heyland, G. R., and Twomey, T. R., Measurement of Positron-Rare Gas Total Cross-Sections at Intermediate Energies, *Appl. Phys.* **11**, 321–325 (1976).
 - 8923 Cosby, P. C., Ling, J. H., Peterson, J. R., and Moseley, J. T., Photodissociation and Photodetachment of Molecular Negative Ions. III. Ions Formed in $CO_2/O_2/H_2O$ Mixtures, *J. Chem. Phys.* **65**, 5267–5274 (1976).
 - 8935 Rudge, M. R. H., On the Convergence of a Variational Method for Potential Scattering, *J. Phys. B* **9**, 2357–2363 (1976).
 - 8936 Salop, A., Electron Impact Ionization of Multicharged Ions, *Phys. Rev. A* **14**, 2095–2102 (1976).
 - 8937 Huetz, A., Cresteau, F., Joyez, G., Mazeau, J., and Pichou, F., Electron-Helium Scattering near the 2^1S -State Threshold, *J. Phys. B* **9**, 3023–3035 (1976).
 - 8938 Vanderpoorten, R., A Local Optical Potential Study of Elastic e^-Li Scattering, *J. Phys. B* **9**, L535–L538 (1976).
 - 8939 Jhanwar, B. L., and Khare, S. P., e^-He Atoms Elastic Scattering at Intermediate Energies, *J. Phys. B* **9**, L527–L529 (1976).
 - 8940 Heideman, H. G. M., Van De Water, W., Nienhuis, G., and Peeters, P. H., Correlation Effects in the Electron Impact Excitation of Helium near the Ionization Threshold, *J. Phys. B* **9**, L523–L526 (1976).
 - 8941 Bottcher, C., Dissociative Recombination of the Hydrogen Molecular Ion, *J. Phys. B* **9**, 2899–2921 (1976).
 - 8942 Shevelko, V. P., Urnov, A. M., and Vinogradov, A. V., Inelastic Transitions Between Close Atomic Levels Induced by Electrons and Protons, *J. Phys. B* **9**, 2859–2867 (1976).
 - 8943 Rosner, S. D., Gaily, T. D., and Holt, R. A., Laser Fluorescence Measurement of Relative Electron Impact Cross Sections for Metastable States of Ar^+ and Xe^+ , *J. Phys. B* **9**, L489–L491 (1976).
 - 8944 Amusia, M. Ya., Cherepkov, N. A., Chernysheva, L. V., and Shapiro, S. G., Elastic Scattering of Slow Positrons by Helium, *J. Phys. B* **9**, L531–L534 (1976).
 - 8945 Chan, Y. F., and McEachran, R. P., Inelastic P-Wave Positron-Hydrogen Scattering, *J. Phys. B* **9**, 2869–2875 (1976).
 - 8946 Amusia, M. Ya., Ivanov, V. K., and Chernysheva, L. V., Photoionization Cross Section of $4d^{10}Xe$, Cs, and Ba Subshells with Account of Electron Shell Rearrangement, *Phys. Lett. A* **59**, 191–193 (1976).
 - 8947 Carter, S. L., and Kelly, H. P., Double Photoionization Cross Section of Argon, *J. Phys. B* **9**, L565–L568 (1976).

- 8948 Strathdee, S., and Browning, R., Dissociative Photoionization of H_2 at 26.9 eV, *J. Phys. B* **9**, L505-L507 (1976).
- 8949 Amusia, M. Ya., Cherepkov, N. A., Radojevic, V., and Zivanovic, D., Generalized Oscillator Strength and Its First Derivative for Helium in the Optical Limit, *J. Phys. B* **9**, L469-L472 (1976).
- 8955 Fabrikant, I. I., Effect of the Low-Lying D Level on the Cross Section for Excitation by Slow Electrons of the Cs Atom Resonance Line, *Opt. Spectrosc. (USSR)* **41**, 106-108 (1976).
- 8956 Hutt, P. K., Islam, M. M., Rabheru, A., and McDowell, M. R. C., Empirical Tests of the Electron-Atom Dispersion Relation, *J. Phys. B* **9**, 2447-2460 (1976).
- 8957 Mohlmann, G. R., and De Heer, F. J., Measurements of the Radiative Lifetime of $CH_2(\bar{b}^1B_1)$ and Absolute $CH_2(\bar{b}^1B_1 \rightarrow \bar{a}^1A_1)$ Emission Cross Sections for Electrons (0-2000 eV) on CH_2 , *Chem. Phys. Lett.* **43**, 236-239 (1976).
- 8958 Pullen, B. P., and Stockdale, J. A. D., Dissociative Ionization of SF_6 by Electron Impact, *Int. J. Mass Spectrom. Ion Phys.* **19**, 35-42 (1976).
- 8959 Dixon, A. J., Harrison, M. F. A., and Smith, A. C. H., A Measurement of the Electron Impact Ionization Cross Section of Helium Atoms in Metastable States, *J. Phys. B* **9**, 2617-2631 (1976).
- 8960 Van Veen, E. H., Van Dijk, W. L., and Brongersma, H. H., Low-Energy Electron-Impact Excitation Spectra of Formaldehyde, Acetaldehyde and Acetone, *Chem. Phys.* **16**, 337-345 (1976).
- 8961 Mohlmann, G. R., and De Heer, F. J., Lifetimes of the Vibrational $HBr^+(A^2\Sigma^+)$ and $DBr^+(A^2\Sigma^+)$ States and Emission Cross Sections for the Corresponding ($A^2\Sigma^+$, $v' \rightarrow X^2\Pi$, v'') Transitions, *Chem. Phys.* **17**, 147-154 (1976).
- 8962 Wilden, D. G., Hicks, P. J., and Comer, J., Autoionization of N_2 Studied Using an Electron Time-of-Flight Coincidence Spectrometer, *J. Phys. B* **9**, 1959-1974 (1976).
- 8963 Keto, J. W., Gleason Jr., R. E., Bonifield, T. D., Walters, G. K., and Soley, F. K., Collisional Mixing of the Lowest Bound Molecular States in Xenon and Argon, *Chem. Phys. Lett.* **42**, 125-128 (1976).
- 8964 Wells, W. C., Borst, W. L., and Zipf, E. C., Translational Spectroscopy of Metastable Fragments Produced by Dissociative Excitation of Atmospheric Gases by Electron Impact. I. Nitrogen, *Phys. Rev. A* **14**, 695-706 (1976).
- 8965 Ho, Y. K., and Fraser, P. A., S-Wave Collisions of Positrons with Helium, *J. Phys. B* **9**, 3213-3224 (1976).
- 8966 Broad, J. T., and Reinhardt, W. P., One- and Two-Electron Photoejection from H^- : A Multichannel J-Matrix Calculation, *Phys. Rev. A* **14**, 2159-2173 (1976).
- 8967 Amusia, M. Ya., and Ivanov, V. K., The Peculiarities of Photoelectron Angular Distribution and Ionization Cross Section of $5p^6$ Subshell in Xe, *Phys. Lett. A* **59**, 194-196 (1976).
- 8968 Dufay, M., Carre, M., Gaillard, M. L., Meunier, G., Winter, H., and Zgainski, A., High-Resolution Studies in Ion Beams with Laser-Induced Resonances, *Phys. Rev. Lett.* **37**, 1678-1681 (1976).
- 8969 Zittel, P. F., Ellison, G. B., O'Neil, S. V., Herbst, E., Lineberger, W. C., and Reinhardt, W. P., Laser Photoelectron Spectrometry of CH_2^- . Singlet-Triplet Splitting and Electron Affinity of CH_2 , *J. Am. Chem. Soc.* **98**, 3731-3732 (1976).
- 8978 Drukarev, G. F., Multiple Scattering Approach to the Vibrational Excitation of Molecules by Slow Electrons, (In) *The Physics of Electronic and Atomic Collisions: Invited Lectures, Review Papers, and Progress Reports of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 231-240 (1976).
- 8979 Hertel, I. V., Hermann, H. W., Reiland, W., Stamatovic, A., and Stoll, W., Electron Scattering by Laser-Excited Atoms, (In) *The Physics of Electronic and Atomic Collisions: Invited Lectures, Review Papers, and Progress Reports of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 158-175 (1976).
- 8980 Schmitz, W., Breuckmann, B., and Mehlhorn, W., Low-Energy Electron Spectra of Atomic Ca and Sr Excited by 2 keV Electrons, *J. Phys. B* **9**, L493-L497 (1976).
- 8981 Ross, K. J., Outley, T. W., Pejcev, V., and Rassi, D., The Ejected-Electron Spectrum of Sodium Vapour Autoionizing Levels Excited by 35 to 400 eV Electrons, *J. Phys. B* **9**, 3237-3245 (1976).
- 8982 Stone, E. J., Lawrence, G. M., and Fairchild, C. E., Kinetic Energies and Angular Distributions of Oxygen Atom Photofragments Produced by Photodissociation of O_2 and N_2O in the Vacuum Ultraviolet, *J. Chem. Phys.* **65**, 5083-5092 (1976).
- 8983 Kronebusch, P. L., and Berkowitz, J., Photodissociative Ionization in the 21-41 eV Region: O_2 , N_2 , CO , NO , CO_2 , H_2O , NH_3 and CH_4 , *Int. J. Mass Spectrom. Ion Phys.* **22**, 283-306 (1976).
- 8984 Lineberger, W. C., Photodetachment Threshold Processes, (In) *The Physics of Electronic and Atomic Collisions: Invited Lectures, Review Papers, and Progress Reports of the IXth International Conference on the Physics of Electronic and Atomic Collisions* (Seattle, Washington, 24-30 July 1975), J. S. Risley and R. Geballe, editors, University of Washington Press, Seattle, Washington, 584-592 (1976).
- 8985 Wine, P. H., and Glick, R. E., Helium Emission Spectra—II. Pressures to 0.91 Torr, *J. Quant. Spectrosc. Radiat. Transfer* **16**, 879-898 (1976).
- 9011 Truhlar, D. G., Brandt, M. A., Srivastava, S. K., Trajmar, S., and Chutjian, A., Quantum Mechanical and Crossed Beam Study of Vibrational Excitation of N_2 by Electron Impact at 30-75 eV, *J. Chem. Phys.* **66**, 655-663 (1977).
- 9012 Vroom, D. A., Palmer, R. L., and McGowan, J. W., Measurement of Energy Distributions of Secondary Electrons Ejected from Argon by Fast Electrons, *J. Chem. Phys.* **66**, 647-654 (1977).
- 9013 Heddle, D. W. O., Keesing, R. G. W., and Parkin, A., High Resolution Studies of Electron Excitation. IV. The $n = 3$ States of Helium, *Proc. R. Soc. London Ser. A* **352**, 419-428 (1977).
- 9014 Hall, R. I., Cadez, I. M., Schermann, C., and Tronc, M., Differential Cross Sections for Dissociative Attachment in CO , *Phys. Rev. A* **15**, 599-610 (1977).
- 9015 Bhaskar, N. D., Jadaszliwer, B., and Bederson, B., Scattering of Low-Energy Electrons by Excited Sodium Atoms Using a Photon and Electron Atomic Beam Recoil Technique, *Phys. Rev. Lett.* **38**, 14-17 (1977).
- 9016 Pindzola, M. S., Bhatia, A. K., and Temkin, A., Electron-Impact Excitation of Carbon and Silicon in the Distorted-Wave Approximation, *Phys. Rev. A* **15**, 35-42 (1977).
- 9017 Gerzanich, G. Yu., Skubenich, V. V., and Zapesochnyi, I. P., Excitation of Triatomic Molecules by Electron Impact. I: The N_2O Molecule, *Opt. Spectrosc. (USSR)* **41**, 315-317 (1976).
- 9018 John, T. L., and Williams, R. J., Free-Free Absorption by N^- and O^- , *J. Quant. Spectrosc. Radiat. Transfer* **17**, 169-174 (1977).
- 9019 Reid, R. H. G., Kingston, A. E., and Jamieson, M. J., On the Accuracy of Semiclassical Treatments of Differential Scattering of Electrons by Atoms: $1s-2s$ and $1s-2p$ Excitation in e-H Collisions, *J. Phys. B* **10**, 55-70 (1977).

- 9020 Szmytkowski, C., and Zubek, M., Calculation of the Cross Sections for Resonant Vibrational Excitation of CO₂ by Electron Collision, *J. Phys. B* **10**, L31-L34 (1977).
- 9021 Zubek, M., and Szmytkowski, C., Calculation of Resonant Vibrational Excitation of CO by Scattering of Electrons, *J. Phys. B* **10**, L27-L29 (1977).
- 9022 Sullivan, J., Coleman, J. P., and Bransden, B. H., The Use of Second Order Potentials in the Theory of the Scattering of Charged Particles by Atoms. III. A Four-Channel Approximation for Electron and Proton Scattering by Hydrogen Atoms, *J. Phys. B* **5**, 2061-2065 (1972).
- 9023 Cherepkov, N. A., and Chernysheva, L. V., Random Phase Approximation with Exchange for Open-Shell Atoms: Photoionization of Cl, *Phys. Lett. A* **60**, 103-105 (1977).
- 9024 Swanson, J. R., and Armstrong Jr., L., Multiconfiguration Hartree-Fock Calculation of Photoionization Cross Sections of the Rare Gases, *Phys. Rev. A* **15**, 661-667 (1977).
- 9025 Ng, C. Y., Trevor, D. J., Mahan, B. H., and Lee, Y. T., Photoionization Studies of the Kr₂ and Ar₂ Van Der Waals Molecules, *J. Chem. Phys.* **66**, 446-449 (1977).
- 9026 Mandl, A., Cesium Halide Photodissociation Cross Sections, *J. Quant. Spectrosc. Radiat. Transfer* **17**, 73-76 (1977).
- 9027 Hansen, J. E., Ziegenbein, B., Lincke, R., and Kelly, H. P., Observation and Interpretation of the Photoionization Cross Section of the Neutral Iron Atom (Fe I), *J. Phys. B* **10**, 37-45 (1977).
- 9028 Orth, R. G., and Dunbar, R. C., Photodissociation of Nitrous Oxide Cation, *J. Chem. Phys.* **66**, 1616-1620 (1977).
- 9039 Hata, J., Theoretical Study of Electron-Helium Resonance Scattering Below the First Excitation Threshold, *J. Chem. Phys.* **66**, 1266-1272 (1977).
- 9040 Chan, F. T., and Chang, C. H., Polarization Fractions in Glauber Theory for Electron Impact Excitation of the $n = 3$ Levels of Atomic Hydrogen, *Phys. Rev. A* **15**, 118-127 (1977).
- 9041 Byron Jr., F. W., and Joachain, C. J., Elastic Scattering of Electrons and Positrons by Complex Atoms at Intermediate Energies, *Phys. Rev. A* **15**, 128-146 (1977).
- 9042 Dance, D. F., and Walker, I. C., Electron Energy Loss Spectrum of Nitrous Oxide, *J. Chem. Soc. Faraday Trans. 2* **72**, 2105-2107 (1976).
- 9043 Bordonaro, G., Ferrante, G., Zarcone, M., and Cavaliere, P., Positron- and Electron-Alkali Atom Low-Energy Elastic Scattering by a JWKB-Approximated Polarized Orbital Method, *Nuovo Cimento B* **35**, 349-362 (1976).
- 9044 Nakazaki, S., Electron-Impact Excitation Cross-Sections for Helium-Like Ions: C V, N VI, O VII and Ne IX, *J. Phys. Soc. Jpn.* **41**, 2084-2090 (1976).
- 9045 Borrell, P., Guyon, P. M., and Glass-Maujean, M., H₂ and D₂ Photon Impact Predissociation, *J. Chem. Phys.* **66**, 818-827 (1977).
- 9046 Williams, R. S., and Shirley, D. A., Comparison of Final State Approximations in the Calculation of Total and Differential Photoemission Cross Sections of Neon, *J. Chem. Phys.* **66**, 2378-2386 (1977).
- 9047 Heinzmann, U., Schinkowski, D., and Zeman, H. D., Comment on Measuring Photoionization Cross Sections of Excited Atomic States, *Appl. Phys.* **12**, 113 (1977).
- 9055 Boesten, L. G. J., Heideman, H. G. M., and Twigt, W., Ionization of He⁺-Ions by Electron Impact in the Threshold Region, *Physica (Utrecht) C* **84**, 417-424 (1976).
- 9056 Oda, N., Tahira, S., Nishimura, F., and Koike, F., Energy and Angular Distribution of Electrons Ejected from Autoionization States in Helium by Electron Impact, *Phys. Rev. A* **15**, 574-587 (1977).
- 9057 Shiu, Y.-J., Biondi, M. A., and Sipler, D. P., Dissociative Recombination in Xenon: Variation of the Total Rate Coefficient and Excited-State Production with Electron Temperature, *Phys. Rev. A* **15**, 494-498 (1977).
- 9058 Ton-That, D., and Flannery, M. R., Cross Sections for Ionization of Metastable Rare-Gas Atoms (Ne*, Ar*, Kr*, Xe*) and of Metastable N₂*, CO* Molecules by Electron Impact, *Phys. Rev. A* **15**, 517-526 (1977).
- 9059 Ugbabe, A., Teubner, P. J. O., Weigold, E., and Arriola, H., Angular Correlations Between Electrons and Photons in the Electron Excitation of Helium and Neon, *J. Phys. B* **10**, 71-79 (1977).
- 9060 Kadota, K., and Kaneko, Y., Formation of Metastable State Molecular Ions by Electron Impact of N₂, CO, O₂ and NO, *J. Phys. Soc. Jpn.* **42**, 250-254 (1977).
- 9061 Dey, S., Dixon, A. J., Lassey, K. R., McCarthy, I. E., Teubner, P. J. O., Weigold, E., Bagus, P. S., and Viinikka, E. K., (e,2e) Spectroscopy of the CO Molecule, *Phys. Rev. A* **15**, 102-111 (1977).
- 9062 Mohlmann, G. R., and De Heer, F. J., Emission Cross Sections of H_α and CH(A²Δ → X²Π) Radiations for Electron Impact on Hydrocarbons, *Chem. Phys.* **19**, 233-240 (1977).
- 9063 Liu, J. W., and Smith Jr., V. H., A Critical Study of High Energy Electron Scattering from H₂, *Chem. Phys. Lett.* **45**, 59-63 (1977).
- 9064 Amusia, M. Ya., Cherepkov, N. A., and Radojevic, V., Photoionization Cross-Section Calculations for 4d¹⁰ Subshell of In in the RPAE, *Phys. Lett. A* **60**, 24-26 (1977).
- 9065 Orth, R. G., Dunbar, R. C., and Rigglin, M., Measurement of the Angular Distribution and Energy of Ionic Fragments from Photodissociation of Molecular Ions, *Chem. Phys.* **19**, 279-288 (1977).
- 9066 Kawasaki, M., Litvak, H., and Bersohn, R., Molecular Beam Photodissociation of TII: Bond Energy and State Symmetry, *J. Chem. Phys.* **66**, 1434-1436 (1977).
- 9126 Kley, D., Lawrence, G. M., and Stone, E. J., The Yield of N(²D) Atoms in the Dissociative Recombination of NO⁺, *J. Chem. Phys.* **66**, 4157-4165 (1977).
- 9127 Dickinson, A. S., Differential Cross Sections for Electron Scattering by Strongly Polar Molecules, *J. Phys. B* **10**, 967-981 (1977).
- 9128 Reid, R. H. G., Kingston, A. E., and Jamieson, M. J., A Comparison Between Semiclassical and Quantal Treatments of Elastic e-H(1s) Collisions at Intermediate Energies, *J. Phys. B* **10**, 841-846 (1977).
- 9129 Huang, J. T. J., and Chan, F. T., Glauber e⁻-H₂ Elastic Cross Sections Using the Model of Independent Scattering Centers, *Phys. Rev. A* **15**, 1782-1784 (1977).
- 9130 Dube, L., and Herzenberg, A., Vibrational Excitation of Polar Molecules by Slow Electrons: HCl, *Phys. Rev. Lett.* **38**, 820-823 (1977).
- 9131 Ormonde, S., Effect of Resonances on the Near-Threshold Electron Detachment Cross Sections of F⁻, *Phys. Rev. Lett.* **38**, 690-693 (1977).
- 9132 Cook, T. B., Dunning, F. B., Foltz, G. W., and Stebbings, R. F., Absolute Measurement of the Photoionization Cross Section for Ground-State Cesium Atoms, *Phys. Rev. A* **15**, 1526-1529 (1977).
- 9133 Hong, S. P., Woo, S. B., and Helmy, E. M., Photodetachment of Thermally Relaxed CO₂⁻, *Phys. Rev. A* **15**, 1563-1569 (1977).
- 9134 Shardanand, and Prasad Rao, A. D., Collision-Induced Absorption of O₂ in the Herzberg Continuum, *J. Quant. Spectrosc. Radiat. Transfer* **17**, 433-439 (1977).
- 9167 Byron Jr., F. W., and Joachain, C. J., Elastic Scattering of Electrons and Positrons by Atomic Hydrogen and Helium at

- Intermediate and High Energies, *J. Phys. B* **10**, 207-226 (1977).
- 9168 Joachain, C. J., Vanderpoorten, R., Winters, K. H., and Byron Jr., F. W., Optical Model Theory of Elastic Electron- and Positron-Argon Scattering at Intermediate Energies, *J. Phys. B* **10**, 227-238 (1977).
- 9169 Hermann, H. W., Hertel, I. V., Reiland, W., Stamatovic, A., and Stoll, W., Measurement of the Collision-Induced Alignment in the Differential Scattering by Laser-Excited Atoms: 3P to nS Transitions Excited by Electron Scattering on Sodium, *J. Phys. B* **10**, 251-267 (1977).
- 9170 Vroom, D. A., and Palmer, R. L., Measurement of Energy Distributions of Secondary Electrons Ejected from Water Vapor by Fast Electrons, *J. Chem. Phys.* **66**, 3720-3723 (1977).
- 9171 Felden, M. M., Cross-Section Calculations for Excitation of Helium Atom by Electron and Hydrogen Atom in Ochkur-Born Approximation, *Physica (Utrecht) C* **84**, 439-443 (1976).
- 9172 Kessler, J., Lucas, C. B., and Vuskovic, L., The Polarization of Electrons Elastically Scattered from Xenon at Energies Between 150 and 1200 eV, *J. Phys. B* **10**, 847-860 (1977).
- 9173 Kelodner, P., Winterfeld, C., and Yablonovitch, E., Molecular Dissociation of SF₆ by Ultra-Short CO₂ Laser Pulses, *Opt. Commun.* **20**, 119-122 (1977).
- 9190 Zajonc, A. G., Weinreich, G., and Zorn, J. C., Differential Cross Section for Electron Impact Excitation of Metastable Helium Measured by the Atomic Time-of-Flight Method, *J. Phys. B* **10**, L43-L46 (1977).
- 9191 Keesing, R. G. W., High Resolution Studies of Electron Excitation. V. The Metastable States of Helium, *Proc. R. Soc. London Ser. A* **352**, 429-439 (1977).
- 9192 Roy, A. C., and Sil, N. C., Elastic Scattering of Electrons from Ar and Kr in the Second-Order Eikonal Approximation, *Phys. Rev. A* **15**, 935-939 (1977).
- 9219 Chen, S. T., and Gallagher, A., Electron Excitation of Thallium 7²S_{1/2} and 6²D_{3/2,5/2} Levels, *Phys. Rev. A* **15**, 888-895 (1977).
- 9220 Missavage, D. W., Manson, S. T., and Daum, G. R., Photoionization of Positive Ions. I. Oxygen, *Phys. Rev. A* **15**, 1001-1005 (1977).
- 9221 Phillips, E., Lee, L. C., and Judge, D. L., Dispersed Fluorescence Observations of the CO(A¹Π → X¹Σ⁺) Transitions from Photodissociation of CO₂, *J. Chem. Phys.* **66**, 3688-3693 (1977).
- 9222 Black, G., Sharpless, R. L., and Slinger, T. G., Production of CS(a¹Π) in the Photodissociation of CS₂ Below 1600 Å, *J. Chem. Phys.* **66**, 2113-2117 (1977).
- 9238 Le Dourneuf, M., and Lan, V. K., The Variable-Phase Method in Multichannel Electron-Atom or Electron-Ion Scattering, *J. Phys. B* **10**, L35-L42 (1977).
- 9239 Dahlgren, P. W., and Levin, F. S., Low-Energy e⁻ + H Scattering as a Test of the Inhomogeneous Equation Method, *J. Phys. B* **10**, 471-481 (1977).
- 9240 Beaty, E. C., Hesselbacher, K. H., Hong, S. P., and Moore, J. H., Triple-Differential Three-Dimensional Cross Sections for Low-Energy Electron Impact Ionization of Helium, *J. Phys. B* **10**, 611-620 (1977).
- 9241 Morrison, M. A., and Collins, L. A., Convergence Studies of Low-Energy Static e-N₂ Collisions, *J. Phys. B* **10**, L119-L123 (1977).
- 9242 Teillet-Billy, D., and Fiquet-Fayard, F., The NO⁻³Σ⁻ and 1Δ Resonances: Theoretical Analysis of Electron Scattering Data, *J. Phys. B* **10**, L111-L117 (1977).
- 9243 Ton-That, D., Manson, S. T., and Flannery, M. R., Cross Sections for Excitation and Ionization in e-He(2¹,³S) Collisions, *J. Phys. B* **10**, 621-635 (1977).
- 9244 Dewangan, D. P., and Walters, H. R. J., The Elastic Scattering of Electrons and Positrons by Helium and Neon: The Distorted-Wave Second Born Approximation, *J. Phys. B* **10**, 637-661 (1977).
- 9245 Domenicucci, A. G., and Miller, K. J., Generalized Oscillator Strengths and Total Cross Sections for H₂, N₂, and O₂ with an Independent Particle Model, *J. Chem. Phys.* **66**, 3927-3937 (1977).
- 9246 Pejcev, V., Ross, K. J., Rassi, D., and Ottley, T. W., The Ejected-Electron Spectrum of Cadmium Vapour Autoionizing Levels Excited by 15 to 400 eV Electrons, *J. Phys. B* **10**, 459-469 (1977).
- 9254 Oda, N., Energy and Angular Distributions of Electrons from Atoms and Molecules by Electron Impact, *Radiat. Res.* **64**, 80-95 (1975).
- 9255 Koppe, V. T., Danilevskii, N. P., and Koval, A. G., Dissociative Excitation of Molecules by Electron Impact, *Sov. Phys. JETP* **43**, 1103-1104 (1976).
- 9256 Abdallah Jr., J., and Truhlar, D. G., Application of the Variational Least Squares Method to Inelastic Scattering, *J. Chem. Phys.* **60**, 4670-4675 (1974).
- 9257 Vuskovic, L., Kurepa, M. V., and Bocvarski, V., Differential Cross Sections of 200 and 300 eV Electrons Elastically Scattered by Krypton Atoms, *Fizika (Zagreb)* **7**, 163-167 (1975).
- 9258 Rescigno, T. N., Orthogonality Constraints in Electron Scattering by Open-Shell Targets: Comments on a Paper by Riley and Truhlar, *J. Chem. Phys.* **66**, 5255-5257 (1977).
- 9259 Brion, C. E., and Olsen, L. A. R., Resonance Structure in the Threshold Electron Impact Spectrum of Carbon Monoxide, *Chem. Phys. Lett.* **15**, 442-444 (1972).
- 9260 Reinhardt, J., Joyez, G., Mazeau, J., and Hall, R. I., Electron Impact Threshold Excitation of CO by the Trapped-Electron Method, *J. Phys. B* **5**, 1884-1889 (1972).
- 9261 Krause, H. F., Johnson, S. G., and Datz, S., Electron Impact Excitation of the Hg(6¹P_{n,2}) Metastable States, *Phys. Rev. A* **15**, 611-618 (1977).
- 9262 Goldovskii, V. L., and Shimon, L. L., Electron-Impact Excitation of 5p Electrons of Samarium, Europium, and Thulium, *Opt. Spectrosc. (USSR)* **41**, 648-649 (1976).
- 9263 McEachran, R. P., Morgan, D. L., Ryman, A. G., and Stauffer, A. D., Positron Scattering from Noble Gases, *J. Phys. B* **10**, 663-677 (1977).
- 9264 Hofsaess, D., Photoabsorption of Alkali and Alkaline Earth Elements Calculated by the Scaled Thomas Fermi Method, *Z. Phys. A* **281**, 1-13 (1977).
- 9265 Seguin, H. J. J., McKen, D., and Tulip, J., Photoabsorption and Ionization Cross Sections in a Seeded CO₂ Laser Mixture, *Appl. Opt.* **16**, 77-82 (1977).
- 9291 Crees, M. A., and Moores, D. L., Eigenphase Sums for the Scattering of Electrons by N₂ Molecules, *J. Phys. B* **10**, L225-L227 (1977).
- 9292 Scott, T., and McDowell, M. R. C., Exchange-Polarization Effects in Electron Impact Excitation of Atomic Hydrogen and Helium, *J. Phys. B* **10**, 1059-1071 (1977).
- 9293 Tan, K. H., Fryar, J., Farago, P. S., and McConkey, J. W., Coincidence Studies of He (1¹S-2¹P) Excitation by Electron Impact, *J. Phys. B* **10**, 1073-1082 (1977).
- 9294 Rohr, K., Vibrational Excitation of SF₆ by Low-Energy Electron Impact, *J. Phys. B* **10**, 1175-1179 (1977).
- 9295 Srivastava, R., and Rai, D. K., Electron-Impact Double-Electron Excitation and Autoionization in Alkaline Earths, *Phys. Rev. A* **15**, 1906-1908 (1977).
- 9296 Compton, R. N., On the Formation of Positive and Negative Ions in Gaseous UF₆, *J. Chem. Phys.* **66**, 4478-4485 (1977).

- 9297 Gianturco, F. A., and Rahman, N. K., e^- -HF Scattering: Behaviour of Rotational Excitation at the Thresholds for Outer-Channel Opening, *J. Phys. B* **10**, L219-L223 (1977).
- 9298 Brunt, J. N. H., King, G. C., and Read, F. H., A Study of Resonance Structure in Helium Using Metastable Excitation by Electron Impact with High Energy Resolution, *J. Phys. B* **10**, 433-448 (1977).
- 9299 Campeanu, R. I., and Humberston, J. W., The Scattering of S-Wave Positrons by Helium, *J. Phys. B* **10**, L153-L158 (1977).
- 9300 Weiss, M. J., Berkowitz, J., and Appelman, E. H., Photoionization of Ozone: Formation of O_1^+ and O_3^+ , *J. Chem. Phys.* **66**, 2049-2053 (1977).
- 9301 Osumi, M., and Kunitomo, T., Calculation of Absorption Coefficient for the v_2 and v_3 Bands of Sulfur Dioxide, *J. Quant. Spectrosc. Radiat. Transfer* **17**, 493-499 (1977).
- 9302 Msezane, A., Reilman, R. F., Manson, S. T., Swanson, J. R., and Armstrong Jr., L., Photoionization of Positive Ions: Outer p Subshells of the Noble-Gas Isoelectronic Sequence, *Phys. Rev. A* **15**, 668-674 (1977).
- 9303 Huber, B. A., Cosby, P. C., Peterson, J. R., and Moseley, J. T., Photodetachment and De-Excitation of Excited NO_2^- , *J. Chem. Phys.* **66**, 4520-4526 (1977).
- 9304 Baronavski, A. P., and McDonald, J. R., Electronic, Vibrational and Rotational Energy Partitioning of CN Radicals from the Laser Photolysis of ICN at 266 nm, *Chem. Phys. Lett.* **45**, 172-176 (1977).
- 9325 Domcke, W., and Cederbaum, L. S., A Simple Formula for the Vibrational Structure of Resonances in Electron-Molecule Scattering, *J. Phys. B* **10**, L47-L52 (1977).
- 9326 Jaduszliwer, B., Bhaskar, N. D., and Bederson, B., Differential Spin Exchange in the Elastic Scattering of Low-Energy Electrons by Rubidium, *Phys. Rev. A* **14**, 162-168 (1976).
- 9327 Ho, Y. K., Zero-Energy Born Exchange Amplitude for Electron-Helium Scattering, *J. Phys. B* **10**, L149-L152 (1977).
- 9328 Wight, G. R., and Van Der Wiel, M. J., Post-Collision Interaction in 4d Ionization of Xenon, *J. Phys. B* **10**, 601-610 (1977).
- 9329 Morgenstern, R., Niehaus, A., and Thielmann, U., Interference of Autoionizing Transitions in Time-Dependent Fields, *J. Phys. B* **10**, 1039-1058 (1977).
- 9330 Read, F. H., The Analysis of Post-Collision Interactions in Ejected-Electron Spectra, *J. Phys. B* **10**, L207-L212 (1977).
- 9331 Rescigno, T. N., Bender, C. F., and McKoy, V., The Equations-of-Motion Method for F_2 : Transition Energies, Oscillator Strengths and Born Cross Sections, *Chem. Phys. Lett.* **45**, 307-310 (1977).
- 9332 Watson Jr., J., and Anderson, R. J., Excitation of the $E,F^1\Sigma_g^+$ States of H_2 by Electron Impact, *J. Chem. Phys.* **66**, 4025-4030 (1977).
- 9333 Gianturco, F. A., and Thompson, D. G., Theoretical Evidence for Short-Lived Resonances in Electron Scattering by HCl and HF Molecules, *J. Phys. B* **10**, L21-L26 (1977).
- 9334 Shannon, S. P., Codling, K., and West, J. B., The Absolute Photoionization Cross Sections of the Spin-Orbit Components of the Xenon 4d Electron from 70-130 eV, *J. Phys. B* **10**, 825-830 (1977).
- 9340 Weigold, E., McCarthy, I. E., Dixon, A. J., and Dey, S., Ground State Correlations in H_2 Measured by the (e,2e) Technique, *Chem. Phys. Lett.* **47**, 209-212 (1977).
- 9341 Felden, M. M., and Felden, M. A., Excitation of the 2^1S and 2^3S States of Helium Atoms by Electron and Hydrogen Atom Impact, *Can. J. Phys.* **55**, 396-402 (1977).
- 9342 Bui, T. D., Computer Calculations of Slow Electrons Scattering by Sodium Atoms, *Can. J. Phys.* **55**, 742-746 (1977).
- 9343 Dixon, A. J., Dey, S., McCarthy, I. E., Weigold, E., and Williams, G. R. J., (e,2e) Spectroscopy of H_2O —Separation Energy Spectra and Valence Orbital Electron Momentum Distributions, *Chem. Phys.* **21**, 81-88 (1977).
- 9344 Mohlmann, G. R., Bhutani, K. K., and De Heer, F. J., Emission Cross Sections of $HCl^+(A^2\Sigma^+, v' \rightarrow X^2\Pi, v'')$ for Electrons on HCl and Lifetimes of the $HCl^+(A^2\Sigma^+, v')$ States, *Chem. Phys.* **21**, 127-134 (1977).
- 9345 Mitra, C., and Sil, N. C., A New Method for CB and CBO Cross Sections of 1s-2s Transition in e^- -He $^+$ Collision, *Indian J. Phys.* **50**, 922-924 (1976).
- 9346 Maiti, N., and Sil, N. C., An Integral Form of the Adiabatic-Exchange Approximation Applied to the e^- -He System, *Indian J. Phys.* **50**, 641-649 (1976).
- 9347 Collins, L. A., and Norcross, D. W., Low-Energy Electron Collisions with Highly Polar Molecules: LiF, *Phys. Rev. Lett.* **38**, 1208-1211 (1977).
- 9348 Vestal, M. L., and Maclaure, G. H., Photodissociation of the Dimer Ions Ar_2^+ , Ne_2^+ , and $(CO_2)_2^+$, *Chem. Phys. Lett.* **43**, 499-501 (1976).
- 9349 Frey, R., Gotchev, B., Kalman, O. F., Peatman, W. B., Pollak, H., and Schlag, E. W., Photoionization Resonance Spectra of CO_2^+ and Threshold Electron-Ion Coincidence Measurements of the Fragmentation of CO_2^+ , *Chem. Phys.* **21**, 89-100 (1977).
- 9350 Feldmann, D., Rackwitz, R., Heinicke, E., and Kaiser, H. J., Photoablosung von Elektronen der Ionen B^+ , Ga^+ , In^+ , Tl^+ , Ge^+ , Sn^+ und Pb^+ , *Z. Naturforsch. Teil A* **32**, 302-306 (1977).
- 9351 Mount, G. H., Warden, E. S., and Moos, H. W., Photoabsorption Cross Sections of Methane from 1400 to 1850 Å, *Astrophys. J.* **214**, L47-L49 (1977).
- 9365 Joachain, C. J., Winters, K. H., Cartiaux, L., and Mendez-Moreno, R. M., Elastic Scattering of Fast Electrons by the 2s State of Atomic Hydrogen, *J. Phys. B* **10**, 1277-1287 (1977).
- 9366 Theodosiou, C. E., Electron Distributions from Fast $e^- + Na$ Collisions, *J. Phys. B* **10**, L253-L256 (1977).
- 9367 Tambe, B. R., Electron-Impact-Induced Fine-Structure Transitions in Singly Ionized Carbon, *J. Phys. B* **10**, L249-L252 (1977).
- 9368 Mathur, D., and Hasted, J. B., Total Cross Section Function for e^-N_2 Resonant Scattering, *J. Phys. B* **10**, L265-L267 (1977).
- 9369 Van Wingerden, B., Weigold, E., De Heer, F. J., and Nygaard, K. J., Elastic Scattering of Electrons by Molecular and Atomic Hydrogen, *J. Phys. B* **10**, 1345-1362 (1977).
- 9370 Shapiro, M., Exact Collinear Calculations of the $N_2O(X^1\Sigma^+) \rightarrow N_2(^1\Sigma_g^+) + O(^1S)$ Photodissociation Process, *Chem. Phys. Lett.* **46**, 442-449 (1977).
- 9371 Chapman Jr., F. M., and Hayes, E. F., Dipole Operators in Photoionization Calculations, *Chem. Phys. Lett.* **48**, 176-178 (1977).
- 9372 Rigglin, M., Orth, R. G., and Dunbar, R. C., Photodissociation of $C_4H_8^+$ Ions: Comparison of Experimental Branching Ratios with Unimolecular Decomposition Theory, *J. Chem. Phys.* **65**, 3365-3371 (1976).
- 9376 Feldmann, D., Infrared Photodetachment Measurements near Thresholds of C^- , *Chem. Phys. Lett.* **47**, 338-340 (1977).
- 9393 Tsurubuchi, S., Mohlmann, G. R., and De Heer, F. J., Excitation Cross Sections for the H_{3-} State for Electron Impact on Hydrogen Containing Molecules, *Chem. Phys. Lett.* **48**, 477-480 (1977).
- 9394 Khayrallah, G. A., and Smith, S. J., The Cross Section for Production of the 3s State of Atomic Hydrogen in Dissociative Excitation of H_2 by Electrons, *Chem. Phys. Lett.* **48**, 289-293 (1977).

- 9395 Sil, N. C., and Saha, B. C., Elastic e^- -H Scattering at Low Energies, *J. Phys. Soc. Jpn.* **42**, 721-722 (1977).
- 9396 Hayashi, S., and Kuchitsu, K., A Quasi-Adiabatic Polarization Potential for Elastic Electron-Atom Scattering. II. Application to Hydrogen Atom, *J. Phys. Soc. Jpn.* **42**, 628-632 (1977).
- 9397 Blaauw, H. J., De Heer, F. J., Wagenaar, R. W., and Barends, D. H., Total Cross Sections for Electron Scattering from N_2 and He, *J. Phys. B* **10**, L299-L303 (1977).
- 9398 Kets, F. B., and Heideman, H. G. M., Parametrised Close-Coupling Calculations on the Electron Impact Excitation of Helium in the Autoionisation Region, *J. Phys. B* **10**, L305-L309 (1977).
- 9399 Ravodina, O. V., and Popova, T. N., Excitation and Deactivation Mechanism of the $B^3\Pi_g$ State of Nitrogen in a Glow Discharge, *Opt. Spectrosc. (USSR)* **40**, 372-374 (1976).
- 9400 Bair, C. H., and Allario, F., Measurement of HCl Absorption Coefficients with a DF Laser, *Appl. Opt.* **16**, 97-100 (1977).
- 9446 Kulagin, V. D., Dissociative Recombination Channels, *Sov. Phys. Dokl.* **21**, 594-596 (1976).
- 9447 Hahn, Y., Dominant Auger Process in Electron-Impact Ionization of Mo Ions, *Phys. Rev. Lett.* **39**, 82-84 (1977).
- 9448 Dillon, M. A., and Lassetre, E. N., An $(e,2e)$ Investigation of the $(2s2p)^1P$ Autoionized Transition in Helium. Comparison with an Accurate Born Calculation, *J. Chem. Phys.* **67**, 680-686 (1977).
- 9456 Ghosh, A. S., Simple Form of the Fixed-Scatterer Approximation: An Application to e^- -H Scattering, *Phys. Rev. Lett.* **38**, 1065-1068 (1977).
- 9457 Pindzola, M. S., Electron-Impact Excitation of O III in the Distorted-Wave Approximation, *Phys. Rev. A* **15**, 2238-2245 (1977).
- 9458 Roy, D., Resonances Below the $n = 3$ Doubly Excited States of Helium, *Phys. Rev. Lett.* **38**, 1062-1065 (1977).
- 9459 Morrison, M. A., Lane, N. F., and Collins, L. A., Low-Energy Electron-Molecule Scattering: Application of Coupled-Channel Theory to e -CO₂ Collisions, *Phys. Rev. A* **15**, 2186-2201 (1977).
- 9460 Berrington, K. A., Burke, P. G., Dufton, P. L., and Kingston, A. E., Electron Collisional Excitation of C III and O V, *J. Phys. B* **10**, 1465-1475 (1977).
- 9461 Chang, E. S., and Wong, S.-F., Isotope Effects in Molecular Scattering by Electrons, *Phys. Rev. Lett.* **38**, 1327-1330 (1977).
- 9462 Gurtler, P., Saile, V., and Koch, E. E., High Resolution Absorption Spectrum of Nitrogen in the Vacuum Ultraviolet, *Chem. Phys. Lett.* **48**, 245-250 (1977).
- 9463 Ng, C. Y., Tiedemann, P. W., Mahan, B. H., and Lee, Y. T., Photoionization Studies of the Diatomic Heteronuclear Rare Gas Molecules XeKr, XeAr, and KrAr, *J. Chem. Phys.* **66**, 5737-5743 (1977).
- 9466 Buckley, B. D., and Burke, P. G., The Scattering of Low-Energy Electrons by Diatomic Molecules, *J. Phys. B* **10**, 725-739 (1977).
- 9467 Tronc, M., Fiquet-Fayard, F., Schermann, C., and Hall, R. I., Differential Cross Sections and Angular Distributions of H^- from Dissociative Electron Attachment to H_2 Between 3.75 and 13 eV, *J. Phys. B* **10**, 305-321 (1977).
- 9468 Donohue, D. E., Schiavone, J. A., and Freund, R. S., Molecular Dissociation by Electron Impact: Optical Emission from Fragments of Methane, Ethylene, and Methanol, *J. Chem. Phys.* **67**, 769-780 (1977).
- 9469 Schiavone, J. A., Donohue, D. E., and Freund, R. S., Molecular Dissociation by Electron Impact: High Rydberg Fragments from Methane, Ethylene, and Ethane, *J. Chem. Phys.* **67**, 759-768 (1977).
- 9470 Srivastava, R., and Rai, D. K., Excitation of Autoionizing Levels in the Collision of Electrons with Alkali-Metal Atoms, *J. Phys. B* **10**, 269-275 (1977).
- 9471 McCarthy, I. E., Noble, C. J., Phillips, B. A., and Turnbull, A. D., Optical Model for Electron Scattering from Inert Gases, *Phys. Rev. A* **15**, 2173-2185 (1977).
- 9472 Baas, R. C., and Jansen, R. H. J., Computer Analysis of Experimental Results on Differential Scattering of Electrons by Gases, *Comput. Phys. Commun.* **12**, 267-276 (1976).
- 9473 Dey, S., Dixon, A. J., McCarthy, I. E., and Weigold, E., $(e,2e)$ Spectroscopy of Ethane, *J. Electron Spectrosc. Relat. Phenom.* **9**, 397-412 (1976).
- 9474 Kivel, B., Resonances in Neutral Bremsstrahlung, *J. Quant. Spectrosc. Radiat. Transfer* **17**, 679-680 (1977).
- 9475 Winters, K. H., Issa, M. R., and Bransden, B. H., Differential Cross Sections and Angular Correlation Parameters for the Excitation of the $n = 3$ Levels of Helium by Electron Impact, *Can. J. Phys.* **55**, 1074-1082 (1977).
- 9476 Williams, G. R. J., McCarthy, I. E., and Weigold, E., Investigation of Generalized Overlap Amplitudes via $(e,2e)$ Spectroscopy, *Chem. Phys.* **22**, 281-287 (1977).
- 9477 Locht, R., The Dissociative Ionization of Carbon Monoxide, *Chem. Phys.* **22**, 13-27 (1977).
- 9478 Percival, I. C., and Richards, D., Collisions of Charged Particles with Highly Excited Non-Hydrogenic Atoms, *J. Phys. B* **10**, 1497-1513 (1977).
- 9479 Delage, A., Roy, D., and Carette, J.-D., Electroexcitation of Xe I Energy Levels in the 18-24 eV Autoionization Region, *J. Phys. B* **10**, 1487-1496 (1977).
- 9480 Campbell, J. D., Hancock, G., and Welge, K. H., Energy Dependence of SF₆ Dissociation by Pulsed CO₂ Laser Radiation, *Chem. Phys. Lett.* **43**, 581-583 (1976).
- 9481 Mandelman, M., and Nicholls, R. W., The Absorption Cross Sections and f -Values for the $v'' = 0$ Progression of Bands and Associated Continuum for the ClO($A^2\Pi$, $\leftarrow X^2\Pi$) System, *J. Quant. Spectrosc. Radiat. Transfer* **17**, 483-491 (1977).
- 9482 Langhoff, S. R., Jaffe, R. L., and Arnold, J. O., Effective Cross Sections and Rate Constants for Predissociation of ClO in the Earth's Atmosphere, *J. Quant. Spectrosc. Radiat. Transfer* **18**, 227-235 (1977).
- 9483 Connerade, J. P., On Double Photoionisation, *J. Phys. B* **10**, L239-L242 (1977).
- 9484 Dehmer, P. M., Luken, W. L., and Chupka, W. A., Competition Between Autoionization and Radiative Emission in the Decay of Excited States of the Oxygen Atom, *J. Chem. Phys.* **67**, 195-203 (1977).
- 9485 Hyman, H. A., Photoionization Cross Sections for Excited States of Argon and Krypton, *Appl. Phys. Lett.* **31**, 14-15 (1977).
- 9486 Atabek, O., Beswick, J. A., Lefebvre, R., Mukamel, S., and Jortner, J., Isotope Effects in Photofragmentation of Linear Triatomics, *Chem. Phys. Lett.* **45**, 211-216 (1977).
- 9487 Sullivan, S. A., Freiser, B. S., and Beauchamp, J. L., Gas Phase Photodissociation Spectrum of Cl₂⁺, *Chem. Phys. Lett.* **48**, 294-298 (1977).
- 9488 Chang, T. N., Application of the Many-Body Theory of Atomic Transitions to the Photoionization of Neon and Argon, *Phys. Rev. A* **15**, 2392-2395 (1977).
- 9489 De Reilhac, L., and Damany, N., Photoabsorption Cross-Section Measurements of Some Gases, from 10 to 50 nm, *J. Quant. Spectrosc. Radiat. Transfer* **18**, 121-131 (1977).
- 9490 Thomas, T. F., Dale, F., and Paulson, J. F., Photodissociation of Positive Ions. I. Photodissociation Spectra of D₂⁺, HD⁺, and N₂O⁺, *J. Chem. Phys.* **67**, 793-800 (1977).

- 9491 Plummer, E. W., Gustafsson, T., Gudat, W., and Eastman, D. E., Partial Photoionization Cross Sections of N_2 and CO Using Synchrotron Radiation, *Phys. Rev. A* **15**, 2339-2355 (1977).
- 9492 Rigaud, P., Leroy, B., Le Bras, G., Poulet, G., Jourdain, J. L., and Combourieu, J., About the Identification of Some UV Atmospheric Absorptions: Laboratory Study of ClO, *Chem. Phys. Lett.* **46**, 161-163 (1977).
- 9493 Kivel, B., Statistical Model for Absorption of Intense Infrared Radiation by Polyatomic Molecules, *Infrared Phys.* **17**, 185-189 (1977).
- 9494 Amusia, M. Ya., Cherepkov, N. A., Pavlin, I., Radojevic, V., and Zivanovic, D., Photoabsorption for Sodium and Magnesium Atoms in the Random-Phase Approximation with Exchange, *J. Phys. B* **10**, 1413-1423 (1977).
- 9495 De Witte, O., Dumanchin, R., Michon, M., and Chatelet, J., Near UV Photophysics of Gaseous UF_6 , *Chem. Phys. Lett.* **48**, 505-508 (1977).
- 9507 Roberts, M. J., Orientation of the 2p State of Atomic Hydrogen Produced by Direct Collisions with Fast Electrons, *J. Phys. B* **10**, 2219-2228 (1977).
- 9508 Khare, S. P., and Kumar Jr., A., Mean Energy Expended per Ion Pair by Electrons in Molecular Nitrogen, *J. Phys. B* **10**, 2239-2251 (1977).
- 9509 Abouaf, R., and Teillet-Billy, D., Fine Structure in Dissociative-Attachment Cross Sections for HCl and DCl, *J. Phys. B* **10**, 2261-2268 (1977).
- 9510 Lee, L. C., Phillips, E., and Judge, D. L., Photoabsorption Cross Sections of CH_4 , CF_4 , CF_3Cl , SF_6 , and C_2F_6 from 175 to 770 Å, *J. Chem. Phys.* **67**, 1237-1246 (1977).
- 9511 Feldmann, D., Rackwitz, R., Kaiser, H. J., and Heinicke, E., Photodetachment bei Einigen Negativen Molekulionen: P_2^- , As_2^- , CH_2^- , CH_3^- , S_3^- , *Z. Naturforsch. Teil A* **32**, 600-603 (1977).
- 9512 Rackwitz, R., Feldmann, D., Kaiser, H. J., and Heinicke, E., Photodetachment bei Einigen Zweiatomigen Negativen Hydridionen: BeH^- , MgH^- , CaH^- , ZnH^- , PH^- , AsH^- , *Z. Naturforsch. Teil A* **32**, 594-599 (1977).
- 9605 Rohr, K., N_2^- Resonance at 2 eV as an Energy Standard in Low-Energy Electron Scattering Experiments, *J. Phys. B* **10**, 2215-2218 (1977).
- 9606 Jain, N. K., and Narain, U., On Dielectronic Recombination Coefficients of the H, He and Ne Sequences, *Sol. Phys.* **50**, 361-363 (1976).
- 9607 Hayes, M. A., Norcross, D. W., Mann, J. B., and Robb, W. D., Electron Impact Excitation of Be^+ : A Benchmark Study, *J. Phys. B* **10**, L429-L434 (1977).
- 9608 Stewart, A. L., On the Determination of Phaseshifts for the H^- Continuum Using Perturbation Theory, *J. Phys. B* **10**, 2061-2071 (1977).
- 9648 Fabrikant, I. L., Scattering of Slow Electrons by Polar Molecules, *Sov. Phys. JETP* **44**, 77-82 (1976).
- 9649 Shchemelinin, S. G., Andreev, E. P., Cherepkov, N. A., and Sheftel, S. I., Scattering of Electrons by Inert Gas Atoms with Ejection of One or Two Electrons from the Outer Shell, *Sov. Phys. JETP* **44**, 261-268 (1976).
- 9650 Fujita, T., Iwai, T., Ogura, K., Watanabe, S., and Watanabe, Y., Dissociative Excitation of Water Molecule by Electron Impacts. I. General Survey and the Born Approximation, *J. Phys. Soc. Jpn.* **42**, 1296-1304 (1977).
- 9651 Shuttleworth, T., Newell, W. R., and Smith, A. C. H., Electron Impact Excitation of the Sodium 3^2S-3^2P Transition, *J. Phys. B* **10**, 1641-1651 (1977).
- 9652 Buckley, B. D., The Rotational Excitation of Molecular Nitrogen by Electron Impact, *J. Phys. B* **10**, L351-L355 (1977).
- 9653 Hayashi, S., and Kuchitsu, K., Elastic Scattering of Electrons by Molecules at Intermediate Energies. II. Application to Hydrogen Molecule, *J. Phys. Soc. Jpn.* **42**, 1319-1326 (1977).
- 9654 Fujita, T., Iwai, T., Ogura, K., Watanabe, S., and Watanabe, Y., Dissociative Excitation of Water Molecule by Electron Impacts. II. The Glauber Approximation, *J. Phys. Soc. Jpn.* **42**, 1305-1309 (1977).
- 9655 Crowe, A., and McConkey, J. W., Cross-Sections for the Direct and Dissociative Ionization of NH_3 by Electron Impact, *Int. J. Mass Spectrom. Ion Phys.* **24**, 181-189 (1977).
- 9656 Suzuki, I. H., and Maeda, K., Ionization Efficiency Curves of Ethane by Electron Impact, *Int. J. Mass Spectrom. Ion Phys.* **24**, 147-160 (1977).
- 9657 Pabst, R. E., Perry, D. L., Margrave, J. L., and Franklin, J. L., Electron Impact Studies of Tin Tetrahalides $SnCl_4$, $SnBr_4$, and SnI_4 , *Int. J. Mass Spectrom. Ion Phys.* **24**, 323-333 (1977).
- 9658 Shimamori, H., and Hatano, Y., Thermal Electron Attachment to O_2 in the Presence of Various Compounds as Studied by a Microwave Cavity Technique Combined with Pulse Radiolysis, *Chem. Phys.* **21**, 187-201 (1977).
- 9659 Mital, H. P., Chandra, S., and Narain, U., Radiative Attachment of Electrons with Some Atoms, *J. Phys. Soc. Jpn.* **42**, 1282-1286 (1977).
- 9660 Roy, D., and Carette, J.-D., The Fine Structure of the Electroexcitation Function of the Kr $4p^55s$ and Xe $5p^55s$ States in the Autoionization Region, *J. Electron Spectrosc. Relat. Phenom.* **9**, 483-486 (1976).
- 9661 Ledovskoi, V. P., Scattering of Fast Electron Beam by a Low-Density Gas, *Sov. Phys. Tech. Phys.* **21**, 1311-1312 (1976).
- 9662 Samoilov, V. P., Smirnov, Yu. M., and Starikova, G. S., Measurement of the Excitation Cross Sections of the Lines of Multiply Charged Neon Ions Resulting from Electron Impact, *J. Appl. Spectrosc. (USSR)* **25**, 1183-1184 (1976).
- 9663 Rudd, M. E., and Du Bois, R. D., Absolute Doubly Differential Cross Sections for Ejection of Secondary Electrons from Gases by Electron Impact. I. 100- and 200-eV Electrons on Helium, *Phys. Rev. A* **16**, 26-32 (1977).
- 9664 Schiavone, J. A., Donohue, D. E., Herrick, D. R., and Freund, R. S., Electron-Impact Excitation of Helium: Cross Sections, n. and l Distributions of High Rydberg States, *Phys. Rev. A* **16**, 48-61 (1977).
- 9665 McGuire, E. J., Electron Ionization Cross Sections in the Born Approximation, *Phys. Rev. A* **16**, 62-72 (1977).
- 9666 McGuire, E. J., Scaled Electron Ionization Cross Sections in the Born Approximation, *Phys. Rev. A* **16**, 73-79 (1977).
- 9667 Gien, T. T., Elastic Electron-Hydrogen Scattering in a Modified Glauber Method with the Inclusion of Glauber Exchange, *Phys. Rev. A* **16**, 123-128 (1977).
- 9668 Weingartshofer, A., Holmes, J. K., Caudle, G., Clarke, E. M., and Kruger, H., Direct Observation of Multiphoton Processes in Laser-Induced Free-Free Transitions, *Phys. Rev. Lett.* **39**, 269-270 (1977).
- 9669 Gien, T. T., Electron-Hydrogen Scattering in a Modified Glauber Theory with Exchange, *Phys. Lett. A* **61**, 299-301 (1977).
- 9670 Chandra, N., Low-Energy Electron Scattering from CO. II. Ab initio Study Using the Frame-Transformation Theory, *Phys. Rev. A* **16**, 80-108 (1977).
- 9671 Lee, C. M., Multichannel Dissociative Recombination Theory, *Phys. Rev. A* **16**, 109-122 (1977).
- 9672 Rohr, K., Threshold Resonances in Vibrational Excitation of HBr Molecules by Electron Impact, *J. Phys. B* **10**, L399-L402 (1977).
- 9673 Wilden, D. G., Hicks, P. J., and Comer, J., An Electron Impact Energy-Loss Study of Triplet States of Acetylene, I.

- Phys. B **10**, L403-L407 (1977).
- 9674 Wight, G. R., Van Der Wiel, M. J., and Brion, C. E., Dipole Oscillator Strengths for Excitation, Ionisation and Fragmentation of NH_3 in the 5 to 60 eV Region, J. Phys. B **10**, 1863-1873 (1977).
- 9675 Chang, E. S., Angular Distributions of Resonantly Scattered Electrons in Vibrational Excitation of HF, J. Phys. B **10**, L395-L398 (1977).
- 9676 Chesnyi, A. S., Vinogradov, V. S., and Rambidi, N. G., Scattering of Fast Electrons by Polar Molecules. I. Intensity of the Elastic Scattering of Electrons by LiH Molecules, Zh. Strukt. Khim. **16**, 458-462 (1975).
- 9677 Samoilov, V. P., Smirnov, Yu. M., and Starikova, G. S., Excitation of Ne III by Electron Impact, Opt. Spectrosc. (USSR) **42**, 22-23 (1977).
- 9678 De Heer, F. J., McDowell, M. R. C., and Wagenaar, R. W., Numerical Study of the Dispersion Relation for e^- -H Scattering, J. Phys. B **10**, 1945-1953 (1977).
- 9679 Williams, W., and Trajmar, S., Electron Impact Excitation of Potassium at 6.7, 16 and 60 eV, J. Phys. B **10**, 1955-1965 (1977).
- 9680 Tiwari, P., Hashim, M. A., Ojha, S. P., and Rustgi, O. P., Comment on the Photoionization Cross Section of Lithium and Its Isoelectronic Sequence, Can. J. Phys. **55**, 972-974 (1977).
- 9681 Johnson, W. R., and Lin, C. D., Application of the Relativistic Random-Phase Approximation to the Photoionisation of Atoms, J. Phys. B **10**, L331-L334 (1977).
- 9682 McGilvery, D. C., and Morrison, J. D., Photodissociation of CH_3^+ and CD_3^+ , J. Chem. Phys. **67**, 368-369 (1977).
- 9683 Bryant, H. C., Dieterle, B. D., Donahue, J., Sharifian, H., Tootoonchi, H., Wolfe, D. M., Gram, P. A. M., and Yates-Williams, M. A., Observation of Resonances Near 11 eV in the Photodetachment Cross Section of the H^- Ion, Phys. Rev. Lett. **38**, 228-230 (1977).
- 9684 Samson, J. A. R., Haddad, G. N., and Gardner, J. L., Total and Partial Photoionization Cross Sections of N_2 from Threshold to 100 Å, J. Phys. B **10**, 1749-1759 (1977).
- 9685 Kozlov, M. G., and Kotochigova, S. A., Absorption Spectra of Rare-Earth Elements in the Schumann Region: Europium, Opt. Spectrosc. (USSR) **41**, 208-212 (1976).
- 9686 Batovskii, O. M., and Gurev, V. I., Temperature Dependence of the Continuous Ultraviolet Absorption Spectrum of Molecular Fluorine, Opt. Spectrosc. (USSR) **41**, 185-187 (1976).
- 9687 Samson, J. A. R., and Hancock, W. H., Angular Distribution of Photoelectrons from Atomic Oxygen at 736 Å and 584 Å, Phys. Lett. A **61**, 380-382 (1977).
- 9688 Belevtsev, A. A., and Mnatsakanyan, A. K., Approximate Method for Calculating the Photoabsorption Cross Sections of Diatomic Molecules, Opt. Spectrosc. (USSR) **42**, 31-34 (1977).
- 9689 Feldmann, D., Rackwitz, R., Heinicke, E., and Kaiser, H. J., Photodetachment of Some Atomic Negative Ions: P^- , As^- , Sb^- , Bi^- , Te^- , Cr^- , Ni^- , Z. Phys. A **282**, 143-148 (1977).
- 9690 Tadjeddine, M., and Parlant, G., Computed Photodissociation Cross Sections of HD^+ and Franck-Condon Factors for the Ionization of HD, Mol. Phys. **33**, 1797-1803 (1977).
- 9716 Capezzuto, P., Cramarossa, F., D'Agostino, R., and Molinari, E., Contribution of Vibrational Excitation to the Rate of Carbon Dioxide Dissociation in Electrical Discharges, J. Phys. Chem. **80**, 882-888 (1976).
- 9717 Kocher, C. A., and Smith, A. J., Evidence for High- l Rydberg States in Atomic Lithium Excited by Electron Impact, Phys. Lett. A **61**, 305-307 (1977).
- 9718 Alguard, M. J., Hughes, V. W., Lubell, M. S., and Wainwright, P. F., Measurement of Spin-Exchange Effects in Electron-Hydrogen Collisions: Impact Ionization, Phys. Rev. Lett. **39**, 334-338 (1977).
- 9719 Jimenez, E., and Campos, J., Poblacion Indirecta de Algunos Niveles de Xe en la Excitacion con Electrones, An. Fis. **72**, 162-165 (1976).
- 9720 Potter, J. E., Steph, N. C., Dwivedi, P. H., and Golden, D. E., Population of the Vibrational Levels of the Ground State of Nitrogen by Low Energy Electron Scattering, J. Chem. Phys. **66**, 5557-5563 (1977).
- 9721 Elitzur, M., Collisional Excitations by Charged Particles in Interstellar Clouds. II. Exact Solution of a Model, Astron. Astrophys. **59**, 173-176 (1977).
- 9722 Amusia, M. Ya., Baltenkov, A. S., and Paiziev, A. A., Bremsstrahlung of Electrons on Atoms with Allowance for Polarizability, JETP Lett. **24**, 332-335 (1976).
- 9723 Cederbaum, L. S., Domcke, W., and Von Niessen, W., Radiative Electron-Attachment Spectra of O_1 and SO_2 , A Theoretical Investigation, Mol. Phys. **33**, 1399-1406 (1977).
- 9724 Caldwell, C. D., and Zare, R. N., Alignment of Cd Atoms by Photoionization, Phys. Rev. A **16**, 255-262 (1977).
- 9725 Slater, J., and Lineberger, W. C., High-Resolution Photodetachment Studies of P^- and Te^- , Phys. Rev. A **15**, 2277-2282 (1977).
- 9742 Samoilov, V. P., Smirnov, Yu. M., and Starikova, G. S., Determination of the Atomic Constants of Kr II, J. Appl. Spectrosc. (USSR) **23**, 1117-1119 (1975).
- 9743 Harker, A. B., Ho, W., and Ratto, J. J., Photodissociation Quantum Yield of NO_2 in the Region 375 to 420 nm, Chem. Phys. Lett. **50**, 394-397 (1977).
- 9744 Brunner, F., Cotter, T. P., Kompa, K. L., and Proch, D., Collisionless CO_2 Laser-Induced Photodissociation of Sulfur Hexafluoride in a Molecular Beam Experiment, J. Chem. Phys. **67**, 1547-1554 (1977).
- 9745 Langhoff, P. W., Langhoff, S. R., and Corcoran, C. T., Photoabsorption in Formaldehyde, J. Chem. Phys. **67**, 1722-1731 (1977).
- 9746 Dutta, C. M., Chapman Jr., F. M., and Hayes, E. F., Theoretical Studies of Photoionization Cross Sections and Angular Distributions for the Hydrogen Molecule, J. Chem. Phys. **67**, 1904-1908 (1977).
- 9747 Codling, K., Hamley, J. R., and West, J. B., The Absolute Photoabsorption Cross Section of Atomic Sodium in the Region above the 2p Threshold (45-250 eV), J. Phys. B **10**, 2797-2807 (1977).
- 9763 Stevens, W. J., Gardner, M., Karo, A., and Julienne, P. S., Theoretical Determination of Bound-Free Absorption Cross Sections in Ar_3^+ , J. Chem. Phys. **67**, 2860-2867 (1977).
- 9801 McDowell, M. R. C., Morgan, L. A., Myerscough, V. P., and Scott, T., Electron Impact Excitation of One- and Two-Electron Positive Ions, J. Phys. B **10**, 2727-2738 (1977).
- 9802 Madison, D. H., Calhoun, R. V., and Shelton, W. N., Triple-Differential Cross Sections for Electron-Impact Ionization of Helium, Phys. Rev. A **16**, 552-562 (1977).
- 9803 Rountree, S. P., Electron-Impact Excitation of Atomic Oxygen: $^3\text{P}-3s\ ^1\text{S}^0$ and $^4\text{P}-3s\ ^3\text{S}^0$, J. Phys. B **10**, 2719-2725 (1977).
- 9804 Aleksakhin, I. S., and Shafranyosh, I. I., Absolute Effective Cross Sections for the Excitation of a Strontium Atom from Metastable States by Electron Collision, Opt. Spectrosc. (USSR) **42**, 443 (1977).
- 9805 Rountree, S. P., and Parnell, G., Modified Variational Method for Scattering, Phys. Rev. Lett. **39**, 853-856 (1977).
- 9806 Kurepa, M. V., and Belic, D. S., Dissociative Attachment of Electrons to Chlorine Molecule, Chem. Phys. Lett. **49**, 608-610 (1977).
- 9807 Narain, U., Mital, H. P., and Chandra, S., Radiative Recombination in Some Ions of Astrophysical Interest, Sol.

- Phys. **52**, 417-422 (1977).
- 9808 Nakazaki, S., and Hashino, T., Excitation of Beryllium-Like Ions by Electron Impact, *J. Phys. Soc. Jpn.* **43**, 281-286 (1977).
- 9809 Brenton, A. G., Dutton, J., Harris, F. M., Jones, R. A., and Lewis, D. M., Experimental Determination of Total Scattering Cross Sections for Positron-Helium Collisions, *J. Phys. B* **10**, 2699-2710 (1977).
- 9819 Toshima, N., Collision Processes of Highly Excited Hydrogen Atom. II. Transitions Between Degenerate States at Low Energies, *J. Phys. Soc. Jpn.* **43**, 605-609 (1977).
- 9820 Chang, E. S., Theory of Angular Distributions of Electrons Resonantly Scattered by Molecules. II. Vibrational and Rotational Excitation of CO, *Phys. Rev. A* **16**, 1850-1853 (1977).
- 9821 Takayanagi, K., Collision Processes Involving Highly-Excited Atoms, *Comments At. Mol. Phys.* **6**, 177-188 (1977).
- 9822 Simony, P. R., McGuire, J. H., Golden, J. E., and Junker, B. R., Generalized Coulomb-Projected Born-Approximation Cross Sections for Atomic Excitation by Charged-Particle Impact, *Phys. Rev. A* **16**, 1401-1406 (1977).
- 9823 Gaucherel, P., and Rowe, B., Measurement of Rates of Charge Exchange and Dissociative Recombination Reactions in Ar-N₂, Ar-H₂ and Ar-O₂ Mixtures, *Int. J. Mass Spectrom. Ion Phys.* **25**, 211-227 (1977).
- 9824 Van Brunt, R. J., Angular Dependence of Proton Kinetic-Energy Distributions from Dissociative Ionization of H₂, *Phys. Rev. A* **16**, 1309-1311 (1977).
- 9825 Rudge, M. R. H., A Local-Potential Method for Calculating Atomic Bound States and Elastic Scattering, *J. Phys. B* **10**, 2451-2457 (1977).
- 9826 Pejcev, V., Otley, T. W., Rassi, D., and Ross, K. J., Ejected-Electron Spectrum of Mg I and Mg II Autoionising Levels Between 20 and 53 eV Excited by Low-Energy Electron Impact on Magnesium Vapour, *J. Phys. B* **10**, 2389-2398 (1977).
- 9827 Borst, W. L., Excitation of the ³D₀ Metastable State in Mercury by Electron Impact, *J. Chem. Phys.* **67**, 2920-2922 (1977).
- 9828 Mark, T. D., and Egger, F., Ionization of Phosphine and Deuterated Phosphine by Electron Impact from Threshold up to 180 eV, *J. Chem. Phys.* **67**, 2629-2635 (1977).
- 9829 Gresteau, F., Hall, R. I., Mazeau, J., and Vichon, D., Electron Impact Excitation of High Vibrational Levels of the H₂, NO and O₂ Ground States, *J. Phys. B* **10**, L545-L548 (1977).
- 9830 John, T. L., and Williams, R. J., Elastic Scattering of Low-Energy Electrons by Atomic Nitrogen, *J. Phys. B* **10**, L531-L533 (1977).
- 9831 McGreevy, E., and Stewart, A. L., Phaseshifts for the ¹P Continuum of Helium, *J. Phys. B* **10**, L527-L529 (1977).
- 9832 Trajmar, S., and Chutjian, A., Electron Impact Excitation of SF₆, *J. Phys. B* **10**, 2943-2949 (1977).
- 9833 Bhatia, A. K., and Temkin, A., A Distorted-Wave Methodology for Electron-Ion Impact Excitation: Calculation for Two-Electron Ions, *J. Phys. B* **10**, 2893-2912 (1977).
- 9834 Carnahan, B. L., and Zipf, E. C., Dissociative Excitation of H₂, HD and D₂ by Electron Impact, *Phys. Rev. A* **16**, 991-1002 (1977).
- 9835 Morrison, M. A., and Lane, N. F., Theoretical Calculation of Cross Sections for Rotational Excitation in e-CO₂ Scattering, *Phys. Rev. A* **16**, 975-980 (1977).
- 9836 Morrison, M. A., and Schneider, B. I., Electron-Molecule Scattering Theory: An R-Matrix Study of Low-Energy Elastic e-N₂ Collisions in the Static-Exchange Approximation, *Phys. Rev. A* **16**, 1003-1012 (1977).
- 9837 Mohlmann, G. R., and De Heer, F. J., Emission Cross Section of the NO(b¹Σ⁻ → a⁴Π) System. Radiative Lifetime and Excitation Energy of the NO(b¹Σ⁻) State, *Chem. Phys. Lett.* **49**, 588-590 (1977).
- 9838 Kulander, K. C., Interpretation of Trapped-Electron Data for Parity-Unfavored Transitions, *Phys. Rev. A* **15**, 1810-1811 (1977).
- 9839 Tronc, M., Fiquet-Fayard, F., Schermann, C., and Hall, R. I., Angular Distributions of O⁻ from Dissociative Electron Attachment to N₂O Between 1.9 and 2.9 eV, *J. Phys. B* **10**, L459-L462 (1977).
- 9840 Klonover, A., and Kaldor, U., Ab initio Calculations of Electron-Molecule Scattering Cross Sections Including Polarization, *Chem. Phys. Lett.* **51**, 321-323 (1977).
- 9841 Hahn, Y., Distorted-Wave Theory of Electron-Ion Collisions. I. Direct Excitation and Ionization, *Phys. Rev. A* **16**, 1964-1973 (1977).
- 9842 Gien, T. T., Elastic Scattering of Electrons by Helium at Intermediate Energies, *Phys. Rev. A* **16**, 1793-1798 (1977).
- 9843 Toshima, N., Collision Processes of Highly Excited Hydrogen Atom. III. Glauber Approximation and n-Changing Transitions, *J. Phys. Soc. Jpn.* **43**, 610-618 (1977).
- 9844 Mark, T. D., Egger, F., and Cheret, M., Ionization of Ammonia and Deuterated Ammonia by Electron Impact from Threshold up to 180 eV, *J. Chem. Phys.* **67**, 3795-3802 (1977).
- 9845 Sergeev, V. M., Approximate Method for Calculating the Elastic Scattering Cross Section for Scattering of Electrons by Atoms, *High Temp. (USSR)* **15**, 169-172 (1977).
- 9846 Weigold, E., Dey, S., Dixon, A. J., McCarthy, I. E., Lassey, K. R., and Teubner, P. J. O., (e,2e) Spectroscopy of N₂-Valence Momentum Distributions and Configuration Interaction, *J. Electron Spectrosc. Relat. Phenom.* **10**, 177-191 (1977).
- 9847 Shiu, Y.-J., and Biondi, M. A., Dissociative Recombination in Krypton: Dependence of the Total Rate Coefficient and Excited-State Production on Electron Temperature, *Phys. Rev. A* **16**, 1817-1820 (1977).
- 9848 Phillips, E., Lee, L. C., and Judge, D. L., Absolute Photoabsorption Cross Sections for H₂O and D₂O from λ 180-790 Å, *J. Quant. Spectrosc. Radiat. Transfer* **18**, 309-313 (1977).
- 9849 McCann, K. J., and Flannery, M. R., Photoionization of Metastable Rare-Gas Atoms (He*, Ne*, Ar*, Kr*, Xe*), *Appl. Phys. Lett.* **31**, 599-601 (1977).
- 9850 Chang, T. N., Many-Body Calculation on the Photoionization of Neon and Argon Isoelectronic Sequences, *Phys. Rev. A* **16**, 1171-1178 (1977).
- 9851 Grossman, L. W., Hurst, G. S., Payne, M. G., and Allman, S. L., Saturated Photodissociation of CsI, *Chem. Phys. Lett.* **50**, 70-73 (1977).
- 9852 Wine, P. H., Ravishankara, A. R., Philen, D. L., Davis, D. D., and Watson, R. T., High Resolution Absorption Cross Sections for the A²Π-X²Π System of ClO, *Chem. Phys. Lett.* **50**, 101-106 (1977).
- 9853 Stafast, H., Schmid, W. E., and Kompa, K. L., Absorption of CO₂ Laser Pulses at Different Wavelengths by Ground-State and Vibrationally Heated SF₆, *Opt. Commun.* **21**, 121-126 (1977).
- 9854 Cartwright, D. C., Chutjian, A., Trajmar, S., and Williams, W., Electron Impact Excitation of the Electronic States of N₂. I. Differential Cross Sections at Incident Energies from 10 to 50 eV, *Phys. Rev. A* **16**, 1013-1040 (1977).
- 9855 Kozlov, M. G., and Krylov, B. E., Atomic Constants Characterizing the Absorption Spectrum of Thallium Vapor in the 2030-600-Å Region, *Opt. Spectrosc. (USSR)* **41**, 428-431 (1976).
- 9856 Vestal, M. L., and Mauclair, G. H., Photodissociation of Positive and Negative Ions Formed in O₂, *J. Chem. Phys.* **67**, 3767-3770 (1977).

- 9857 Vestal, M. L., and Mauclaire, G. H., Photodissociation of Negative Ions Formed in CO_2 and CO_2/O_2 Mixtures, *J. Chem. Phys.* **67**, 3758-3766 (1977).
- 9858 Beswick, J. A., and Jortner, J., Absorption Lineshapes for the Photodissociation of Polyatomic Molecules, *Chem. Phys.* **24**, 1-11 (1977).
- 9913 Cartwright, D. C., Trajmar, S., Chutjian, A., and Williams, W., Electron Impact Excitation of the Electronic States of N_2 . II. Integral Cross Sections at Incident Energies from 10 to 50 eV, *Phys. Rev. A* **16**, 1041-1051 (1977).
- 9952 Chutjian, A., Cartwright, D. C., and Trajmar, S., Electron Impact Excitation of the Electronic States of N_2 . III. Transitions in the 12.5-14.2-eV Energy-Loss Region at Incident Energies of 40 to 60 eV, *Phys. Rev. A* **16**, 1052-1060 (1977).
- 9953 Gehenn, W., and Reichert, E., Scattering of Electrons by Cs Atoms at Low Energies, *J. Phys. B* **10**, 3105-3116 (1977).
- 9954 Dickinson, A. S., and Munoz, J. M., Rotational Excitation of Polar Molecular Ions by Slow Electrons, *J. Phys. B* **10**, 3151-3162 (1977).
- 9955 Davis, J., Kepple, P. C., and Blaha, M., Line Strengths, Collision Strengths and Excitation Rates for Multiply-Charged Silicon Ions, *J. Quant. Spectrosc. Radiat. Transfer* **18**, 535-540 (1977).
- 9956 Domcke, W., and Cederbaum, L. S., Theory of the Vibrational Structure of Resonances in Electron-Molecule Scattering, *Phys. Rev. A* **16**, 1465-1482 (1977).
- 9957 Schneider, B. I., Pseudostates and Low-Energy Electron-Molecule Collisions: Applications to H_2 and N_2 , *Chem. Phys. Lett.* **51**, 578-581 (1977).
- 9958 Kelman, V. A., Excitation of Magnesium Ions in Slow Electron-Ion Collisions, *Sov. Phys. J. No. 8*, 1089-1092 (1975).
- 9959 Polyakova, G. N., Erko, V. F., Ranyuk, A. I., and Pavlichenko, O. S., Velocity Distributions of Excited Hydrogen Atoms Produced in Dissociation of Hydrogen Molecules by Electron Impact, *Sov. Phys. JETP* **44**, 921-923 (1976).
- 9960 Kumar, S., Gupta, A., and Srivastava, M. K., e-H Elastic Scattering in the Glauber-Born Approximation, *Phys. Rev. A* **16**, 1974-1979 (1977).
- 9961 Hayes, M. A., and Seaton, M. J., Accuracy of the Distorted-Wave Approximation for Excitation of Hydrogenic Ions, *J. Phys. B* **10**, L573-L577 (1977).
- 9962 Taylor, P. O., Gregory, D., Dunn, G. H., Phaneuf, R. A., and Crandall, D. H., Absolute Cross Sections for $2s-2p$ Excitation of C^{+3} by Electron Impact, *Phys. Rev. Lett.* **39**, 1256-1259 (1977).
- 9963 Sides, G. D., and Tiernan, T. O., Dissociative Electron Attachment in Nitrogen Trifluoride, *J. Chem. Phys.* **67**, 2382-2384 (1977).
- 9964 Ali, M. K., and Fraser, P. A., The Contribution of Long-Range Forces to Low-Energy Phaseshifts, *J. Phys. B* **10**, 3091-3104 (1977).
- 9965 Burciaga, J. R., Coleman, P. G., Diana, L. M., and McNutt, J. D., Positron-Helium Scattering Cross Sections at Low Energies, *J. Phys. B* **10**, L569-L572 (1977).
- 9966 Tai, H., and Flannery, M. R., Photoionization of Vibrationally Excited Molecular Hydrogen, *Phys. Rev. A* **16**, 1124-1135 (1977).
- 9967 Swanson, J. R., and Armstrong Jr., L., Multiconfiguration Hartree-Fock Calculation of Photoionization Cross Sections of the Rare Gases. II. Final-State Correlation, *Phys. Rev. A* **16**, 1117-1123 (1977).
- 9968 Moskalenko, N. I., Intensity of Oscillatory-Rotational Absorption Bands of Carbon Dioxide, *Sov. Phys. J. No. 2*, 267-270 (1975).
- 9969 Lee, L. C., Cross Sections for the Production of the $\text{N}_2^+(B \rightarrow X)$, $\text{CO}^+(B \rightarrow X)$ and $\text{N}_2\text{O}^+(A \rightarrow X)$ Fluorescence by Photoionisation, *J. Phys. B* **10**, 3033-3045 (1977).
- 9970 Beswick, J. A., Shapiro, M., and Sharon, R., Effect of Initial Excitation in the Photofragmentation of Model HCN and DCN. Comparison Between Approximate and Exact Calculations, *J. Chem. Phys.* **67**, 4045-4052 (1977).
- 9971 Nascimento, M. A. C., and Goddard III, W. A., The Photodetachment Cross Section of the Negative Hydrogen Ion, *Phys. Rev. A* **16**, 1559-1567 (1977).
- 9972 Di Stefano, G., Lenzi, M., Margani, A., and Xuan, C. N., $\text{NH}_2(A^2A_1)$ from the Predissociation of $\text{NH}_3(A^1A_2'')$, *J. Chem. Phys.* **67**, 3832-3833 (1977).
- 10005 Samson, A. V., Effective Cross Sections for Stepwise Excitation of the $2p^33p$ -Levels of Neon, *Opt. Spectrosc. (USSR)* **42**, 321-322 (1977).
- 10006 Hahn, Y., Improved Bethe Approximation for Electron-Ion Impact Ionization, *Phys. Lett. A* **62**, 310-312 (1977).
- 10007 Dill, D., and Dehmer, J. L., Total Elastic Electron Scattering Cross Section for N_2 Between 0 and 1000 eV, *Phys. Rev. A* **16**, 1423-1431 (1977).
- 10008 Hartfuss, H. J., and Roll, H., Population of $3s$, $3p$, and $3d$ Sublevels of Atomic Hydrogen After Dissociative Excitation of Some Alkanes by Electron Impact, *Z. Naturforsch. Teil A* **32**, 720-723 (1977).
- 10009 Foster, G., and Williamson Jr., W., Electron Impact $1s \rightarrow 2s$ Excitation of Atomic Hydrogen in the Exchange-Corrected Eikonal Approximation, *J. Phys. B* **10**, 3129-3134 (1977).
- 10010 Klump, K. N., and Lassetre, E. N., Generalized Oscillator Strength for the Transition $\tilde{A}^1B_{2u} \leftarrow \tilde{X}^1A_{1g}$ in Benzene at Initial Kinetic Energies 400 eV and 500eV, *Chem. Phys. Lett.* **51**, 99-104 (1977).
- 10011 Van Sprang, H. A., Mohlmann, G. R., and De Heer, F. J., Radiative Lifetimes of the $\text{CO } a^3\Sigma^+$, $b^3\Sigma^+$, $c^3\Pi$, $d^3\Delta$ and $B^1\Sigma^+$ States. Absolute Emission Cross Sections for the $b^3\Sigma^+ - a^3\Pi$ and $c^3\Pi - a^3\Pi$ Transitions for Electrons on CO, *Chem. Phys.* **24**, 429-433 (1977).
- 10012 Korchevoi, Yu. P., Lukashenko, V. I., Lukashenko, S. N., and Khilko, I. N., Experimental Determination of the Effective Electron-Ionization Cross Sections of Potassium, Rubidium, and Cesium Atoms Excited to the First Resonance Level, *High Temp. (USSR)* **15**, 7-12 (1977).
- 10013 Gulyaev, R. A., Transitions Between Metastable 2^4S and 2^1S Helium Levels under the Effect of Electron Collisions, *Sov. Astron. AJ* **20**, 763-764 (1976).
- 10014 Korotkov, A. I., Method of Determining Absolute Cross Sections of Collisions of the Second Kind Between $\text{Hg}(6^3P_{0,2})$ Atoms and Slow Electrons, *Sov. Phys. J. No. 2*, 179-182 (1975).
- 10015 Mittleman, M. H., and Von Holdt, R. E., Theory of Low-Energy-Electron Scattering by Polar Molecules, *Phys. Rev.* **140**, A726-A729 (1965).
- 10016 Khare, S. P., and Kumar, A., Fluorescence Efficiencies of Electrons in Molecular Nitrogen and Oxygen Gases, *Planet. Space Sci.* **25**, 555-562 (1977).
- 10017 John, T. L., and Williams, R. J., Improved Estimates of Continuous Absorption from the Free-Free Transitions of C, *Mon. Not. R. Astron. Soc.* **181**, 483-487 (1977).
- 10018 Gustafsson, T., Photoionization Cross Sections of the $5s$ Electrons in Xe Measured with Synchrotron Radiation, *Chem. Phys. Lett.* **51**, 383-385 (1977).
- 10019 Burdett, N. A., and Hayhurst, A. N., Kinetics of Formation and Removal of Atomic Halogen Ions X^- by $\text{HX} + e^- \longleftrightarrow \text{H} + X^-$ in Atmospheric Pressure Flames for Chlorine, Bromine and Iodine, *Proc. R. Soc. London Ser. A* **355**, 377-405 (1977).

- 10020 Lal, M., and Srivastava, M. K., e-H Exchange Scattering in the Generalised Coulomb-Projected Ochkur-Born Approximation, *J. Phys. B* **10**, 2711-2717 (1977).
- 10021 Dewangan, D. P., Distorted Wave Eikonal Approximation for Elastic Electron-Atom Scattering, *Phys. Lett. A* **62**, 303-306 (1977).
- 10022 Morgan, L. A., McDowell, M. R. C., and Callaway, J., Electron Impact Excitation of Resonances Below the $n = 3$ Levels of Atomic Hydrogen, *J. Phys. B* **10**, 3297-3305 (1977).
- 10023 Trajmar, S., Williams, W., and Srivastava, S. K., Electron-Impact Cross Sections for Cu Atoms, *J. Phys. B* **10**, 3323-3333 (1977).
- 10024 Auerbach, D., Cacak, R., Caudano, R., Gaily, T. D., Keyser, C. J., McGowan, J. W., Mitchell, J. B. A., and Wilk, S. F. J., Merged Electron-Ion Beam Experiments. I. Method and Measurements of $(e-H_2^+)$ and $(e-H_3^+)$ Dissociative-Recombination Cross Sections, *J. Phys. B* **10**, 3797-3820 (1977).
- 10025 Weigold, E., Hood, S. T., Fuss, I., and Dixon, A. J., Ionisation of Atomic Hydrogen: Angular Correlations of the Outgoing Electrons, *J. Phys. B* **10**, L623-L627 (1977).
- 10026 Frueholz, R. P., Flicker, W. M., Mosher, O. A., and Kuppermann, A., Excited Electronic States of the Fluorobenzenes by Variable Angle Electron Impact Spectroscopy, *Chem. Phys. Lett.* **52**, 86-91 (1977).
- 10027 Zmbov, K. F., Wu, C. H., and Ihle, H. R., A Mass Spectrometric Study of Heteronuclear Diatomic Alkali Metal Molecules. Dissociation Energies and Ionization Potentials of NaLi, KLi, and NaK, *J. Chem. Phys.* **67**, 4603-4607 (1977).
- 10028 Cadez, I. M., Gresteau, F., Tronc, M., and Hall, R. I., Resonant Electron Impact Excitation of CO_2 in the 4 eV Region, *J. Phys. B* **10**, 3821-3834 (1977).
- 10029 Chang, E. S., Angular Distributions of Electrons in the Electronic Excitation of O_2 , *J. Phys. B* **10**, L677-L680 (1977).
- 10030 Brunt, J. N. H., King, G. C., and Read, F. H., Near-Threshold Electron Impact Excitation of Ultraviolet-Emitting Levels of Neon, Argon, Krypton and Xenon Atoms, *J. Phys. B* **10**, 3781-3796 (1977).
- 10031 Albert, K., Christian, C., Heindorff, T., Reichert, E., and Schon, S., Electron Resonance Scattering from Mercury, *J. Phys. B* **10**, 3733-3739 (1977).
- 10032 Drukarev, G. F., and Yurova, I. Yu., Multiple-Scattering Approach to the Vibrational-Rotational Excitation of Molecules by Slow Electrons, *J. Phys. B* **10**, 3551-3558 (1977).
- 10033 Rohr, K., Characteristics of the Threshold Structures in the e- H_2O Vibrational Excitations, *J. Phys. B* **10**, L735-L738 (1977).
- 10034 Yamazaki, Y., Shimizu, R., Ueda, K., and Hashimoto, H., The Influence of Atomic Wavefunctions on the Spin Polarisation and the Differential Cross Section for Electron Impact Excitation of Mercury, *J. Phys. B* **10**, L731-L734 (1977).
- 10035 Joachain, C. J., and Winters, K. H., The Electron Impact Excitation of the 2^1P State of Helium in the Eikonal-Born Series Approximation, *J. Phys. B* **10**, L727-L730 (1977).
- 10036 Shingal, R., and Srivastava, B. B., A Two-Potential Intermediate-Energy Approximation for Electron-Atom Scattering, *J. Phys. B* **10**, 3725-3732 (1977).
- 10037 Pivovarov, V. A., and Leonov, S. N., Rate Constants for Stepwise Excitation of Vibrational Levels of Carbon Monoxide by Electron Impact, *Sov. Phys. Tech. Phys.* **22**, 206-208 (1977).
- 10038 Kennedy, J. V., Myerscough, V. P., and McDowell, M. R. C., Electron Impact Excitation of the Resonance Transitions of Li, Na and K, *J. Phys. B* **10**, 3759-3780 (1977).
- 10039 Baluja, K. L., and McDowell, M. R. C., Electron Impact Excitation of Fe XXVI and Other One-Electron Ions, *J. Phys. B* **10**, L673-L676 (1977).
- 10040 Langhoff, P. W., Corcoran, C. T., and Sims, J. S., Photoabsorption in Atomic Lithium, *Phys. Rev. A* **16**, 1513-1520 (1977).
- 10041 Macpherson, M. T., and Simons, J. P., Polarized Photofluorescence Excitation Spectroscopy: H_2O Revisited and the Vacuum-Ultraviolet Photodissociation of D_2O , *Chem. Phys. Lett.* **51**, 261-264 (1977).
- 10084 Shimon, L. L., Nepiygov, E. I., and Zapesochnyi, I. P., Intensity Ratios of the Head-Term Components of the Diffuse Thallium Series, *Opt. Spectrosc. (USSR)* **35**, 231-232 (1973).
- 10085 Calhoun, R. V., Madison, D. H., and Shelton, W. N., Angular Correlation Parameters for 1s-2p Excitation of Hydrogen Calculated in the Distorted-Wave Approximation, *J. Phys. B* **10**, 3523-3533 (1977).
- 10086 Baille, P., and Darewych, J. W., Comparison of Local Exchange Potentials for Electron Scattering by Hydrogen Molecules, *J. Phys. B* **10**, L615-L621 (1977).
- 10087 Green, A. E. S., Jackman, C. H., and Garvey, R. H., Electron Impact on Atmospheric Gases. 2. Yield Spectra, *J. Geophys. Res.* **82**, 5104-5111 (1977).
- 10088 Jackman, C. H., Garvey, R. H., and Green, A. E. S., Electron Impact on Atmospheric Gases. 1. Updated Cross Sections, *J. Geophys. Res.* **82**, 5081-5090 (1977).
- 10089 John, T. L., Thermally Averaged Absorption Coefficients of F_2 , *J. Phys. B* **10**, L711-L714 (1977).
- 10090 John, T. L., and Williams, R. J., The Effects of Accurate Target Wavefunctions on the Continuous Absorption of the Negative Nitrogen Ion, *J. Phys. B* **10**, 3377-3380 (1977).
- 10091 Johnson, P. M., Langhoff, P. W., O'Neil, S. V., Corcoran, C. T., and Reinhardt, W. P., Moment-Trace Calculations of Atomic and Molecular Photoabsorption Cross Sections, *Chem. Phys. Lett.* **52**, 380-384 (1977).
- 10092 Drouet, M. G., Photoionization of He and N_2 by UV Radiation from a Copper Plasma Produced by a CO_2 Laser, *Appl. Phys. Lett.* **31**, 647-649 (1977).
- 10093 Cherepkov, N. A., Photoionisation Cross Section and Spin Polarisation of Photoelectrons from Thallium, *J. Phys. B* **10**, L653-L657 (1977).
- 10094 Belik, V. P., Bobashev, S. V., and Shmaenok, L. A., Photoionization of Helium from the Excited State $4p^1P_1$, *JETP Lett.* **25**, 494-497 (1977).
- 10113 Kennedy, D. J., High Energy Electrons and Proton Collections with Helium, Thesis, Queen's University of Belfast, Belfast, Northern Ireland, 194 pages (1968).
- 10117 Kunc, J., and Zgorzelski, M., Collisional Transition Probabilities for Alkali Metal Atoms in Thermal Plasmas from 1000 °K to 8000 °K, *At. Data Nucl. Data Tables* **19**, 1-21 (1977).
- 10118 Kallne, E., and Jones, L. A., Measurements of the Ionisation Rates of Lithium-Like Ions, *J. Phys. B* **10**, 3637-3648 (1977).
- 10119 Johnson, K. E., and Lipsky, S., On the Location of the Lowest Triplet Excitation in Ammonia, *J. Chem. Phys.* **66**, 4719-4720 (1977).
- 10120 Pejcev, V., Rassi, D., and Ross, K. J., High-Resolution Ejected-Electron Spectrum of Cadmium Autoionising Levels Following Two-Electron Excitation by Low-Energy Electron Impact, *J. Phys. B* **10**, L629-L633 (1977).
- 10121 Olsen, A., and Sale, F. R., The Electron Bombardment Dissociation and Thermo-Chemical Stabilities of Silicon Tetrachloride and Silicon Dichloride, *J. Less-Common Met.* **53**, 277-286 (1977).
- 10122 Rescigno, T. N., Hazi, A. U., and Winter, N. W., Comments on the Existence of Low-Energy d-Wave Resonances in

- Electron-Fluorine Atom Scattering, *Phys. Rev. A* **16**, 2488–2490 (1977).
- 10123 Peek, J. M., and Mann, J. B., Continuum Orbital Approximations in Weak-Coupling Theories for Inelastic Electron Scattering, *Phys. Rev. A* **16**, 2315–2322 (1977).
- 10124 Callaway, J., Gau, J. N., Henry, R. J. W., Oza, D. H., Lan, V. K., and Le Dourneuf, M., Excitation of C^{+3} by Electron Impact, *Phys. Rev. A* **16**, 2288–2294 (1977).
- 10125 Carter, S. L., and Kelly, H. P., Double Photoionization of Neon and Argon, *Phys. Rev. A* **16**, 1525–1534 (1977).
- 10126 Smith, G. P., Cosby, P. C., and Moseley, J. T., Photodissociation of Atmospheric Positive Ions. I. 5300–6700 Å, *J. Chem. Phys.* **67**, 3818–3828 (1977).
- 10127 Ng, C. Y., Tiedemann, P. W., Mahan, B. H., and Lee, Y. T., The Binding Energy Between NO and NO^+ , *J. Chem. Phys.* **66**, 3985–3987 (1977).
- 10128 Hilton, P. R., Nordholm, S., and Hush, N. S., The Ground State Inversion Potential Method: Application to the Calculation of Photoionization Cross Sections, *J. Chem. Phys.* **67**, 5213–5223 (1977).
- 10129 Slinger, T. G., Sharpless, R. L., and Black, G., CO_2 Photodissociation, 1060–1175 Å, *J. Chem. Phys.* **67**, 5317–5323 (1977).
- 10130 Hazi, A. U., and Rescigno, T. N., Theoretical Study of the Photoionization of Metastable Neon, *Phys. Rev. A* **16**, 2376–2387 (1977).
- 10158 Chutjian, A., Tanaka, H., Wicke, B. G., and Srivastava, S. K., Electron-Impact Excitation of the Low-Lying Electronic States of HCN, *J. Chem. Phys.* **67**, 4835–4839 (1977).
- 10159 Jain, D. K., and Khare, S. P., Ionizing Collisions of Electrons with C_2H_4 and C_2H_6 , *Indian J. Pure Appl. Phys.* **14**, 201–202 (1976).
- 10160 Chandra, S., Jain, N. K., and Narain, U., Electron Impact Ionization Cross-Sections of Some Organic Molecules, *Indian J. Pure Appl. Phys.* **14**, 776–777 (1976).
- 10161 Chandra, S., and Narain, U., Ionization of Helium-Like Ions, *Indian J. Pure Appl. Phys.* **14**, 693–694 (1976).
- 10162 Pande, A. K., and Singh, R. S., Rotational Excitation of H_2 Molecule by Slow Electrons, *Indian J. Pure Appl. Phys.* **15**, 493–497 (1977).
- 10163 Bussieres, N., and Marmet, P., Ionization and Dissociative Ionization of CO_2 by Electron Impact, *Can. J. Phys.* **55**, 1889–1897 (1977).
- 10164 Mohlmann, G. R., De Heer, F. J., and Los, J., Emission Cross Sections of Balmer- α, β, γ Radiation for Electrons (0–2000 eV) on H_2 and D_2 , *Chem. Phys.* **25**, 103–116 (1977).
- 10174 Blum, K., and Kleinpoppen, H., Even-Odd Parity Coherence Effects in Electron-Hydrogen Scattering, *J. Phys. B* **10**, 3283–3295 (1977).
- 10175 Chantry, P. J., Negative Ion Formation in Cerium Triiodide, *J. Chem. Phys.* **65**, 4412–4420 (1976).
- 10176 Hildenbrand, D. L., Thermochemistry of Gaseous UF_5 and UF_3 , *J. Chem. Phys.* **66**, 4788–4794 (1977).
- 10177 Robb, W. D., and Henry, R. J. W., Close-Coupling Calculations of Electron Scattering by Atomic Fluorine, *Phys. Rev. A* **16**, 2491–2492 (1977).
- 10178 Delage, A., and Carette, J.-D., Sections Efficaces Différentielles Relatives de Diffusion des Electrons Lents (15 à 100 eV) par le Krypton, *Can. J. Phys.* **55**, 1835–1841 (1977).
- 10179 Cooper, R., Grieser, F., Sauer Jr., M. C., and Sangster, D. F., Formation and Decay Kinetics of the 2p Levels of Neon, Argon Krypton, and Xenon Produced by Electron-Beam Pulses, *J. Phys. Chem.* **81**, 2215–2220 (1977).
- 10180 Miller, D. L., Dow, J. D., Houlgate, R. G., Marr, G. V., and West, J. B., The Photoionisation of Krypton Atoms: A Comparison of Pseudopotential Calculations with Experimental Data for the 4p Asymmetry Parameter and Cross Section as a Function of the Energy of the Ejected Photoelectrons, *J. Phys. B* **10**, 3205–3213 (1977).
- 10181 Maya, J., Ultraviolet Absorption Cross Sections of HgI_2 , $HgBr_2$, and Tin (II) Halide Vapors, *J. Chem. Phys.* **67**, 4976–4980 (1977).
- 10182 Eland, J. H. D., and Berkowitz, J., Photoionization Mass Spectrometry of HI and DI at High Resolution, *J. Chem. Phys.* **67**, 5034–5039 (1977).
- 10183 Gurtler, P., Saile, V., and Koch, E. E., Rydberg Series in the Absorption Spectra of H_2O and D_2O in the Vacuum Ultraviolet, *Chem. Phys. Lett.* **51**, 386–391 (1977).
- 10184 Atabek, O., and Lefebvre, R., Coupled Equations Applied to the Photodissociation of Linear Triatomics: A Test of Approximate Schemes for Calculating the Line Shape and the Effect of Final States Interactions, *J. Chem. Phys.* **67**, 4983–4989 (1977).
- 10185 Peterson, J. T., Dependence of the NO_2 Photodissociation Rate Constant on Altitude, *Atmos. Environ.* **11**, 689–695 (1977).
- 10229 Shaw, M. J., and Jones, J. D. C., Measurements of Some Reaction Rates of Importance in KrF Lasers, *Appl. Phys.* **14**, 393–398 (1977).
- 10351 Gau, J. N., and Henry, R. J. W., Excitation of Lithiumlike Ions by Electron Impact, *Phys. Rev. A* **16**, 986–990 (1977).
- 10352 Bogdanova, I. P., and Marusin, V. D., Characteristic Features of the Population of Highly Excited Neon Levels in an Electron Beam, *Opt. Spectrosc. (USSR)* **42**, 573–575 (1977).
- 10353 Stockdale, J. A. D., High Kinetic Energy N^+ Ions from Decay of Doubly Ionized N_2 , *J. Chem. Phys.* **66**, 1792–1794 (1977).
- 10354 Khare, S. P., Shingal, R., and Srivastava, B. B., Absorption Effects in Electron-Hydrogen Molecule Elastic Scattering at Intermediate Energies, *J. Phys. Soc. Jpn.* **43**, 2036–2041 (1977).
- 10355 Roy, D. N., Some Non-Resonance Excitations of Na by Electrons: Application of Combined Classical Theory, *Indian J. Phys. A* **51**, 1–6 (1977).
- 10356 Ranson, P., Vallee, O., and Chapelle, J., Etude Experimentale de l'Emission de Bremsstrahlung Electron Atome dans un Jet de Plasma d'Argon, *Rev. Phys. Appl.* **12**, 1829–1834 (1977).
- 10357 Guskov, Yu. K., Savvov, R. V., and Slobodyanyuk, V. A., Time-of-Flight Spectrometer Measurements of Elastic-Scattering Cross Sections for Electrons with Energies of 0.04–1.5 eV in He and Ne, High Temp. (USSR) **15**, 544–548 (1977).
- 10358 Semenova, I. V., and Smirnov, Yu. M., Measurement of Cross Sections for Electron-Impact Excitation of Atomic-Mercury Lines, *Opt. Spectrosc. (USSR)* **42**, 477–479 (1977).
- 10359 Molina, L. T., Schinke, S. D., and Molina, M. J., Ultraviolet Absorption Spectrum of Hydrogen Peroxide Vapor, *Geophys. Res. Lett.* **4**, 580–582 (1977).
- 10379 Srivastava, S. K., and Jensen, S., Experimental Differential and Integral Electron Impact Cross Sections for the $B^1\Sigma_u^+$ State of H_2 in the Intermediate-Energy Region, *J. Phys. B* **10**, 3341–3346 (1977).
- 10380 Le Dourneuf, M., Lan, V. K., and Burke, P. G., Electron Attachment and Low Energy Elastic Scattering by Carbon, Nitrogen and Oxygen Atoms, *Comments At. Mol. Phys.* **7**, 1–13 (1977).
- 10381 Rosenstock, H. M., McCulloh, K. E., and Lossing, F. P., On the Mechanisms of C_6H_6 Ionization and Fragmentation, *Int. J. Mass Spectrom. Ion Phys.* **25**, 327–341 (1977).
- 10442 Hall, R. L., Dissociative Electron Attachment, (In) *Physics of Ionized Gases 1976: Proceedings of Invited Lectures Given at the VIIIth International Summer School on the Physics of Ionized Gases* (Dubrovnik, Yugoslavia, 27 August–3 September

- 1976), B. Navinsek, editor, University of Ljubljana, Ljubljana, Yugoslavia, 59-70 (1976).
- 10443 Anderson, R. J., Watson Jr., J., and Sharpton, F. A., Electron Impact Excitation of the $G^1\Sigma_g^+$ State of H_2 , *J. Opt. Soc. Am.* **67**, 1641-1643 (1977).
- 10444 Selim, E. T. M., Mass Spectrometric Ionization and Dissociation of Ethane, *Indian J. Pure Appl. Phys.* **14**, 547-555 (1976).
- 10445 Pabst, R. E., Margrave, J. L., and Franklin, J. L., Electron Impact Studies of the Tetrachlorides and Tetrabromides of Silicon and Germanium, *Int. J. Mass Spectrom. Ion Phys.* **25**, 361-374 (1977).
- 10446 Shingal, R., and Srivastava, B. B., An Intermediate-Energy Approximation for Electron-Atom Scattering, *J. Phys. B* **10**, 3715-3723 (1977).
- 10447 Amusia, M. Ya., Ivanov, V. K., and Sheinerman, S. A., Generalized Oscillator Strengths for Discrete Excitations of the Xe $5s^2$ Subshell, *Sov. Phys. Tech. Phys.* **21**, 1299-1300 (1976).
- 10448 Delpech, J.-F., Boulmer, J., and Devos, F., Transitions Between Rydberg Levels of Helium Induced by Electron Collisions, *Phys. Rev. Lett.* **39**, 1400-1403 (1977).
- 10449 Green, A. E. S., Garvey, R. H., and Jackman, C. H., Analytic Yield Spectra for Electrons on H_2 , *Int. J. Quantum Chem. Symp.* **11**, 97-103 (1977).
- 10450 Ricard, A., Touzeau, M., and Moisan, M., Excitation des Ions N_2^+ dans des Decharges R.F., *J. Phys. (Paris)* **38**, 669-672 (1977).
- 10451 Cadez, I. M., Investigation of 3.8 eV Resonance in CO_2 by Electron Impact, (In) *Physics of Ionized Gases 1976: Proceedings of Invited Lectures Given at the VIIIth International Summer School on the Physics of Ionized Gases* (Dubrovnik, Yugoslavia, 27 August-3 September 1976), B. Navinsek, editor, University of Ljubljana, Ljubljana, Yugoslavia, 15-32 (1976).
- 10452 Atabek, O., and Lefebvre, R., Moment Analysis of Dynamics of Photodissociation of Linear Triatomics, *Chem. Phys. Lett.* **52**, 29-33 (1977).
- 10453 Woodruff, P. R., and Marr, G. V., The Photoelectron Spectrum of N_2 , and Partial Cross Sections as a Function of Photon Energy from 16 to 40 eV, *Proc. R. Soc. London Ser. A* **358**, 87-103 (1977).
- 10454 Devdariani, A. Z., and Klyucharev, A. N., Photoionization of Cesium Excited States, *Opt. Spectrosc. (USSR)* **42**, 694-695 (1977).
- 10455 Davenport, J. W., Multiple Scattering Theory of Photoemission, *Int. J. Quantum Chem. Symp.* **11**, 89-96 (1977).
- 10456 Langhoff, P. W., Applications of the Stieltjes-Tchebycheff Procedure for Atomic and Molecular Photoionization Calculations in Hilbert Space, *Int. J. Quantum Chem. Symp.* **11**, 301-310 (1977).
- 10457 Lee, L. C., Slinger, T. G., Black, G., and Sharpless, R. L., Quantum Yields for the Production of $O(^1D)$ from Photodissociation of O_2 at 1160-1770 Å, *J. Chem. Phys.* **67**, 5602-5606 (1977).
- 10480 De Heer, F. J., and Jansen, R. H. J., Total Cross Sections for Electron Scattering by He, *J. Phys. B* **10**, 3741-3758 (1977).
- 10483 Peach, G., Continuous Absorption Coefficients for Non-Hydrogenic Atoms, *Mem. R. Astron. Soc.* **73**, 1-123 (1970).
- 10484 Wilson, K. H., and Nicolet, W. E., Spectral Absorption Coefficients of Carbon, Nitrogen and Oxygen Atoms, *J. Quant. Spectrosc. Radiat. Transfer* **7**, 891-941 (1967).
- 10485 Stilley, J. L., and Callaway, J., Free-Free Absorption Coefficient of the Negative Hydrogen Ion, *Astrophys. J.* **160**, 245-260 (1970).
- 10486 Ohmura, T., Evaluation of Free-Free Absorption Coefficient of the Negative Hydrogen Ion, *Astrophys. J.* **140**, 282-284 (1964).
- 10487 Berger, J. M., Absorption Coefficients for Free-Free Transitions in a Hydrogen Plasma, *Astrophys. J.* **124**, 550-554 (1956).
- 10491 Batenin, V. M., and Chinnov, V. F., Bremsstrahlung of Electrons in a Field of Ar Atoms, *High Temp. (USSR)* **7**, 776-779 (1969).
- 10492 Breene Jr., R. G., and Kaegi-Nardone, M. C., Continuum Infrared Radiation from High-Temperature Air and Nitrogen, *J. Chem. Phys.* **41**, 283-284 (1964).
- 10493 Yaakobi, B., Inverse Bremsstrahlung in the Field of a Lithium Atom, *J. Quant. Spectrosc. Radiat. Transfer* **10**, 61-63 (1970).
- 10494 Peach, G., A General Formula for the Calculation of Absorption Cross Sections for Free-Free Transitions in the Field of Positive Ions, *Mon. Not. R. Astron. Soc.* **130**, 361-377 (1965).
- 10495 Khare, S. P., and Rudge, M. R. H., An Application of a Variational Principle to the Calculation of Free-Free Matrix Elements for H^- , *Proc. Phys. Soc. (London)* **86**, 355-362 (1965).
- 10589 Veillette, P., and Marchand, P., Structures Observées dans la Courbe d'Emission Photonique de N_2 entre 11.00 et 15.50 eV, *Can. J. Phys.* **55**, 2134-2141 (1977).
- 10590 Shuttleworth, T., Newell, W. R., and Smith, A. C. H., High-Resolution Inelastic Scattering of Electrons by Sodium Atoms at Zero Angle, *J. Phys. B* **10**, 3307-3321 (1977).
- 10591 Bhatia, A. K., Temkin, A., and Silver, A., Modification of the Method of Polarized Orbitals for Electron-Alkali Scattering: Calculation of e-Li, (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions* (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat à l'Energie Atomique, Paris, **1**, 6-7 (1977).
- 10592 Chang, E. S., and Wong, S. F., Isotope Effects in Molecular Scattering by Electrons, (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions* (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat à l'Energie Atomique, Paris, **1**, 120-121 (1977).
- 10593 Cartwright, D. C., Trajmar, S., and Chutjian, A., Cross Sections for Electron Impact Excitation of the Electronic States of N_2 , (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions* (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat à l'Energie Atomique, Paris, **1**, 128-129 (1977).
- 10594 Wakiya, K., Takayanagi, T., and Suzuki, H., Differential and Integral Cross Sections for Excitations in O_2 by Electron Collision, (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions* (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat à l'Energie Atomique, Paris, **1**, 130-131 (1977).
- 10595 Rohr, K., Threshold Resonances in Polar Molecules: HBr, (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions* (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat à l'Energie Atomique, Paris, **1**, 136-137 (1977).
- 10596 Gresteau, F., Hall, R. L., Mazeau, J., and Vichon, D., Electron Impact Excitation of High Vibrational Levels of the N_2 Ground State through Valence State Shape Resonances, (In) *ICPEAC X: Abstracts of Papers of the Xth International Conference on the*

- Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 142–143 (1977).
- 10597 Cadez, I. M., Greteau, F., Tronc, M., and Hall, R. I., On the Resonant Electron Impact Excitation of CO_2 in the 4 eV Region, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 146–147 (1977).
- 10598 Greteau, F., Hall, R. I., Mazeau, J., and Vichon, D., Electron Impact Excitation of High Vibrational Levels of the NO and O_2 Ground States through Dissociating Negative-Ion States, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 148–149 (1977).
- 10599 Stefanov, B., Electron-Atom Momentum Transfer Cross-Section for Cs (0.03 to 1.5 eV) from the Electron Thermal Conductivity, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 292–293 (1977).
- 10600 Gehenn, W., and Reichert, E., Scattering of Electrons by Cs-Atoms at Low Energies, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 294–295 (1977).
- 10601 Reichert, E., Albert, K., Christian, C., Heindorff, T., and Schon, S., Electron Resonance Scattering at Mercury, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 298–299 (1977).
- 10602 Andrick, D., and Langhans, L., Measurement of Free-Free Processes in e^- -Ar Scattering, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 350–351 (1977).
- 10603 Oda, N., and Nishimura, F., Absolute Doubly Differential Cross Sections for Ejection of Secondary Electrons from Helium by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 362–363 (1977).
- 10604 Weigold, E., Dixon, A. J., McCarthy, I. E., and Noble, C. J., The Noncoplanar Symmetric (e,2e) Reaction on Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 364–365 (1977).
- 10605 Weigold, E., Fuss, I., McCarthy, I. E., and Noble, C. J., Factorized Distorted Wave Approximation for the (e,2e) Reaction on Atoms: Coplanar Symmetric, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 366–367 (1977).
- 10606 Stefani, G., Camilloni, R., Giardini-Guidoni, A., Tiribelli, R., and Vinciguerra, D., Mapping of Molecular Orbitals in CO_2 and SF_6 Obtained by (e,2e) Technique, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 368–369 (1977).
- 10607 Blaauw, H. J., De Heer, F. J., Wagenaar, R. W., and Barends, D. H., Total Cross Sections for Electron Scattering, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 392–393 (1977).
- 10608 Jost, K., and Mollenkamp, R., Elastic, Excitation, Ionization and Total Cross Sections for Electron Helium Scattering, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 394–395 (1977).
- 10609 Khayrallah, G. A., Effect of Exchange in Electron Excitation to the 2s State of Atomic Hydrogen in the Glauber Approximation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 400–401 (1977).
- 10610 Basu, D., and Roy, A. C., Elastic Scattering of Electrons from Atomic Helium in the Eikonal Approximation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 402–403 (1977).
- 10611 Shelton, W. N., Calhoun, R. V., and Madison, D. H., Electron-Impact Excitation of the 2p State of Atomic Hydrogen in the Distorted-Wave Approximation—Angular Correlation Parameters, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 404–405 (1977).
- 10612 Srivastava, M. K., and Lal, M., e-H Exchange Scattering in Modified Born Approximation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 410–411 (1977).
- 10613 Joachain, C. J., and Winters, K. H., The Excitation of Atomic Hydrogen and Helium by Fast Electrons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 412–413 (1977).
- 10614 Winters, K. H., Distorted-Wave Approximations for Electron-Atom Excitation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 414–415 (1977).
- 10615 Ochkur, V. I., and Burkova, L. A., Second Born Approximation in Electron-Atom Scattering, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 416–417 (1977).
- 10616 Kennerly, R. E., and Bonham, R. A., Accurate Absolute Doubly Differential Cross-Sections for 0.7 eV to 600 eV Electrons Ejected at 90° from He and Ar by 2 keV Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and

- Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 420-421 (1977).
- 10617 Senashenko, V. S., and Strakhova, S. I., The Differential Cross Sections of the Helium Atom Ionization by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 422-423 (1977).
- 10618 Khare, S. P., and Kumar Jr., A., Elastic Scattering of Electrons by Argon Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 426-427 (1977).
- 10619 Mileev, V. N., Safin, V. I., and Strakhova, S. I., The Excitation of the Discrete States of the Heavy Inert Atoms by Electrons in the Glauber Model, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 428-429 (1977).
- 10620 Srivastava, S. K., Trajmar, S., and Cartwright, D. C., Electron Impact Excitation Cross Sections for Kr at 15, 30, 50 and 100 eV, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 430-431 (1977).
- 10621 Chutjian, A., and Cartwright, D. C., Inelastic Differential Cross Sections for Electron-Impact Excitation of Argon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 432 (1977).
- 10622 Lins De Barros, H. G. P., and D'Albuquerque E Castro, J., Resonant Excitation of Lithium by Electron Impact in the Glauber Approximation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 438-439 (1977).
- 10623 Lins De Barros, H. G. P., and Brandi, H. S., Resonant Excitation of Lithium by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 440-441 (1977).
- 10624 Trajmar, S., Williams, W., Srivastava, S. K., and Winter, N. W., Experimental and Theoretical Study of Electron Impact Excitation of Cu, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 442-443 (1977).
- 10625 Crees, M. A., and Moores, D. L., Scattering of Electrons by N₂ Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 476-477 (1977).
- 10626 Collins, L. A., and Norcross, D. W., Scattering of Electrons by LiF, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 480-481 (1977).
- 10627 Kaldor, U., and Klonover, A., Electron-Molecule Scattering Calculations Including Polarization and Correlation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 488-489 (1977).
- 10628 Baille, P., and Darewych, J. W., Electron Molecule Scattering at Middle Energies Using Different Local Exchange Potentials, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 502-503 (1977).
- 10629 Al-Shamma, S. H., and Kleinpoppen, H., Near Threshold Polarization and Excitation Function of Heavy Rare Gas Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 518-519 (1977).
- 10630 Hazi, A. U., Velocity Distribution of H(2s) Resulting from the Electron Impact Dissociation of H₂, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 566-567 (1977).
- 10631 Ito, K., Oda, N., Kouchi, N., Hatano, Y., and Tsuboi, T., Doppler Profile Measurements of Balmer- α by Electron Impact on Simple Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 572-573 (1977).
- 10632 Mohlmann, G. R., De Heer, F. J., and Los, J., Dissociative Excitation of H₂ and D₂ by Electrons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 574-575 (1977).
- 10633 Kollmann, K., Dissociative Autoionization of H₂, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 577 (1977).
- 10634 Polyakova, G. N., Ranyuk, A. I., Erko, V. F., and Pavlichenko, O. S., Kinetic Energy Distributions of Excited H and D Atoms Produced by Electron Impact on H₂O and D₂O Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 578-579 (1977).
- 10635 Polyakova, G. N., Ranyuk, A. I., Erko, V. F., and Pavlichenko, O. S., Energy Spectra of Excited Atoms Produced by Electron Impact Dissociation of H₂ and D₂ Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 580-581 (1977).
- 10636 Fujita, T., Iwai, T., Ogura, K., Watanabe, S., and Watanabe, Y., Calculation of Emission Cross-Sections on the Dissociative Excitation of H₂O by Electron-Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie

- Atomique, Paris, **1**, 582-583 (1977).
- 10637 Hartfuss, H. J., and Schmillen, A., Excitation Cross Sections for the H-States 3s, 3p, 3d After the Dissociative Excitation of Some H-Containing Molecules After e^- Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 584-585 (1977).
- 10638 Mentall, J. E., and Morgan, H. D., Excitation of O_2 and N_2 by Electron Impact in the Extreme Ultraviolet, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 586-587 (1977).
- 10639 Kondow, T., and Kuchitsu, K., $CN(B^2\Sigma-X^2\Sigma)$ Emission Spectra from Cyanides Produced in Collision with Electrons, Metastable Atoms and Photons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 590-591 (1977).
- 10640 Mark, T. D., Egger, F., and Cheret, M., Partial and Total Electron Impact Ionization Cross Sections of NH_3 , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 592-593 (1977).
- 10641 Mark, T. D., and Egger, F., Partial and Total Electron Impact Ionization Cross Sections of PH_3 , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 594-595 (1977).
- 10642 Comtet, G., Brouard, J., and Fournier, P. G., Limits and Possibilities of Translational Spectroscopy, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 598-599 (1977).
- 10643 Siegel, M. W., Experimental Cross Sections for the Production of O_3^+ , O_2^+ and O^+ from Ozone by Low Energy Electron Bombardment, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 600 (1977).
- 10644 Du Bois, R. D., Jeffries, J. B., and Dunn, G. H., Dissociative Recombination Cross Sections for NH_4^+ , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 620-621 (1977).
- 10645 Huber, B. A., Cosby, P. C., Peterson, J. R., and Moseley, J. T., Collisional Deexcitation and Photodetachment of Excited NO_2^- , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 115-116 (1977).
- 10646 Cosby, P. C., Smith, G. P., Peterson, J. R., and Moseley, J. T., Photon Interactions Involving NO_2^- , NO_3^- and Their Hydrates, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 113-114 (1977).
- 10647 Cosby, P. C., Smith, G. P., Ling, J. H., Peterson, J. R., and Moseley, J. T., Photodissociation of O_3^- and Its Hydrates (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 111-112 (1977).
- 10648 Moseley, J. T., Saxon, R. P., Huber, B. A., Cosby, P. C., Abouaf, R., and Tadjeddine, M., Photofragment Spectroscopy and Potential Curves of Ar_2^+ , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 106-107 (1977).
- 10649 Schmoranzner, H., and Zietz, R., Photoexcitation Spectra for Autoionization and Predissociation of Rydberg Terms of NO in the Energy Range from 15.9 to 22.0 eV, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 104-105 (1977).
- 10650 Pernot, C., Ozenne, J. B., Panczel, M., and Durup, J., Experimental and Computational Study of Rotation Effects in Molecular Ion Photodissociation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 94-95 (1977).
- 10651 Tadjeddine, M., Huber, B. A., Ahouaf, R., Cosby, P. C., and Moseley, J. T., Threshold Photofragment Spectroscopy of $O_2^+(a^1\Pi_u)$, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **1**, 92-93 (1977).
- 10721 Burns, D. J., and Hummer, C. R., Electron Excitation of the $B^3\Pi_g$ State of N_2 with Cascade Correction, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 648-649 (1977).
- 10722 Vichon, D., Hall, R. I., Gresteau, F., and Mazeau, J., Electron Impact Excitation of a and b Quartet States of NO and the "Quintet" State of N_2 , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 650-651 (1977).
- 10723 Trajmar, S., and Chutjian, A., Spectroscopy of SF_6 by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 652-653 (1977).
- 10724 Celotta, R. J., Swanson, N., and Kurepa, M. V., Electron Scattering from Ozone, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 656-657 (1977).
- 10725 Vuskovic, L., Srivastava, S. K., and Trajmar, S., Electron Scattering by Lithium Fluoride, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique,

- Paris, 2, 658-659 (1977).
- 10726 Rohr, K., Low Energy Electron Scattering from SF₆ Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 660-661 (1977).
- 10727 Kavei, G., Otley, T. W., Pejcev, V., Rassi, D., and Ross, K. J., Ejected Electron Spectra from Autoionizing Levels in Alkali Metal Vapours Excited by Low Energy Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 664-665 (1977).
- 10728 Otley, T. W., Pejcev, V., Rassi, D., and Ross, K. J., Autoionizing Levels and Auger Transitions in Alkali-Earth Atoms, Excited by Low Energy Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 666-667 (1977).
- 10729 Jung, K., Schubert, E., and Ehrhardt, H., Decay of the Aligned Autoionizing 3s 3p⁰ 4p-State of Argon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 670-671 (1977).
- 10730 Srivastava, S. K., and Trajmar, S., Electron Impact Excitation of Autoionizing States of Krypton, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 676-677 (1977).
- 10731 Dube, L., and Herzenberg, A., Vibrational Excitation of HCl by Electrons at Threshold, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 794-795 (1977).
- 10732 Abouaf, R., and Teillet-Billy, D., Electron Attachment to Polar Molecules: Structure in the Dissociative Attachment Cross Sections for HCl, HBr, HF, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 792-793 (1977).
- 10733 Kauppila, W. E., Stein, T. S., Jesion, G., and Pol, V., Total Cross Section Measurements for Scattering of Intermediate Energy Positrons and Electrons by Helium, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 802-803 (1977).
- 10734 Kurepa, M. V., and Belic, D. S., Cross Sections for Electron Attachment to Chlorine Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 834-835 (1977).
- 10735 Schermann, C., Delon, P., Hall, R. I., and Tronc, M., New Processes for Dissociative Attachment in NO, O₂ and H₂, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 836-837 (1977).
- 10736 Drukarev, G. F., and Pozdnev, S. A., Dissociative Attachment of Electron to Diatomic Molecules H₂, HD, D₂, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 838-839 (1977).
- 10737 Azria, R., Le Coat, Y., and Lefevre, G., Dissociative Electron Attachment in H₂S: Energy and Angular Distributions of H⁺ Fragments, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 844-845 (1977).
- 10738 Brunt, J. N. H., Cvejanovic, S., and Read, F. H., Threshold Electron Spectroscopy of Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 934-935 (1977).
- 10739 Jureta, J., and Cvejanovic, S., High Resolution Threshold Spectroscopy, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 936-937 (1977).
- 10740 Brunt, J. N. H., King, G. C., and Read, F. H., Near-Threshold Excitation of Ultraviolet-Emitting Levels of Atoms and Molecules by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 942-943 (1977).
- 10741 Bullis, R. H., Low Energy Electron-Helium Total Scattering Cross Section, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 946-947 (1977).
- 10742 Stein, T. S., Kauppila, W. E., Jesion, G., and Pol, V., Direct Measurements of Total Cross Sections for Low Energy Electrons Colliding with Helium and Argon in a Curved Axial Magnetic Field, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 948-949 (1977).
- 10743 Van De Water, W., Van Eck, J., and Heideman, H. G. M., Correlation Effects in the Inner and Outer Shell Ionization of Noble Gas Atoms by Electrons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 1064-1065 (1977).
- 10744 Schubert, E., Schuck, A., Jung, K., and Ehrhardt, H., Triple Differential Cross Sections for Electron Impact Ionization of Helium at 30 to 35 eV Collision Energy, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, 2, 1066-1067 (1977).
- 10745 Mark, T. D., Egger, F., Hille, E., Cheret, M., Stori, H., and Stephan, K., Mass Spectrometric Study of the Electron Impact Ionization of the Rare Gases, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of

- Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1070–1071 (1977).
- 10746 Mark, T. D., and Hille, E., Cross Section for Single and Double Electron Impact Ionization of CO_2 , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1076–1077 (1977).
- 10747 Brook, E., Harrison, M. F. A., and Smith, A. C. H., Absolute Measurements of the Electron Impact Ionisation Cross Sections of Carbon, Nitrogen and Oxygen Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1078–1079 (1977).
- 10748 Belic, D. S., and Kurepa, M. V., Total Ionization Cross Sections of Hydrogen Sulfide by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1080–1081 (1977).
- 10749 Hasted, J. B., Hamdan, M., and Birkinshaw, K., Ionization of Positive Ions by Electrons in the Concentric Beam Equipment, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1082–1083 (1977).
- 10750 Crandall, D. H., Taylor, P. O., and Phaneuf, R. A., Electron Impact Ionization of C IV and N V, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1086–1087 (1977).
- 10751 Taylor, P. O., Phaneuf, R. A., Gregory, D., Dunn, G. H., and Crandall, D. H., Absolute Cross Sections for Electron Impact Excitation of C^{+3} , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1100–1101 (1977).
- 10752 Callaway, J., Gau, J. N., Henry, R. J. W., and Oza, D. H., Resonances in the Electron Impact Excitation of C^{+4} , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1102–1103 (1977).
- 10753 Aleksakhin, I. S., Bogachev, G. G., Zapesochnyi, I. P., and Ugrin, S. Yu., Closed Outer Shell Excitation of Barium Atoms by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1300–1301 (1977).
- 10754 Shpenik, O. B., Zapesochnyi, I. P., Souter, V. V., Nepipov, S. I., Romanjuk, N. I., and Aleksakhin, I. S., Excitation of Magnesium Atoms by Monoenergetic Electrons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1302–1303 (1977).
- 10755 McGowan, J. W., and Mitchell, J. B. A., Dependence of (e^- -ion) Dissociative Recombination on Vibrational Excitation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1304–1305 (1977).
- 10756 Khakhaev, A. D., Gostev, V. A., and Saitsev, Yu. V., Measurements of Excitation Functions in Crossed Beams of Metastable Helium Atoms and Electrons, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1308–1309 (1977).
- 10757 Miletic, M., Maksic, R., and Zmbov, K. F., Ionization and Fragmentation of Cs_2 by Electron Impact, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1310 (1977).
- 10758 Sergeev, V. M., A Simple Method to Calculate Total Elastic Cross Sections of Electrons and Ions Collisions with Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1316–1317 (1977).
- 10759 Leveau, J., Valignat, S., and Deigat, F., Destruction par Chocs Electroniques des Atomes Metastables et Pseudo-Metastables de Neon dans une Colonne Positive, J. Phys. (Paris) Lett. **38**, L385–L388 (1977).
- 10760 Stein, T. S., Kaupilla, W. E., Pol, V., Jesion, G., and Smart, J. H., Direct Measurements of Total Cross Sections for Low Energy Positrons Colliding with the Inert Gases, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 804–805 (1977).
- 10761 Brenton, A. G., Dutton, J., and Harris, F. M., Experimental Determination of Total Cross Sections for the Scattering of Low-Energy Positrons by Helium and Neon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 806–807 (1977).
- 10762 Twomey, T. R., Griffith, T. C., and Heyland, G. R., Measurement of Total Cross-Sections for Intermediate Energy Positrons Scattering from Inert-Gas Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 808–809 (1977).
- 10763 Roy, A. C., Scattering of Positrons from Hydrogen in the Second-Order Eikonal Approximation, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 814–815 (1977).
- 10764 Massaro, P. A., and Garibotti, C. R., Scattering of Positrons by Hydrogen Atoms, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21–27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 816–817 (1977).
- 10765 Darewych, J. W., and Sokoloff, J., Variationally Optimized s and p Pseudo States for Low Energy e^+ -H Scattering and Annihilation, (In) ICPEAC X: Abstracts of Papers of the Xth

- International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel editor, Commissariat a l'Energie Atomique, Paris, **2**, 818-819 (1977).
- 10766 Ryman, A. G., McEachran, R. P., and Stauffer, A. D., Positron Scattering from Neon and Argon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 820-821 (1977).
- 10767 Kauppila, W. E., Stein, T. S., Smart, J. H., and Pol, V., Total Cross Section Measurements for Scattering of Low Energy Positrons by Molecules, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 826-827 (1977).
- 10768 Taylor, K. T., Novick, S. E., Slater, J., Mulloney, T. J., Norcross, D. W., and Lineberger, W. C., The Photodetachment Cross Sections for the Alkali Negative Ions in the Vicinity of the ^2P Channel Openings, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1172-1173 (1977).
- 10769 Armstrong Jr., L., and Swanson, J. R., Multiconfiguration Hartree Fock Calculation of Photoionization Cross Sections, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1178-1179 (1977).
- 10770 Rescigno, T. N., Bender, C. F., McKoy, V., and Langhoff, P. W., A Theoretical Study of the Photoionization of N_2 , (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1184-1185 (1977).
- 10771 Breyer, F., Frey, P., and Hotop, H., High Resolution Photodetachment Electron Spectrometry of Negative Ions, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1186-1187 (1977).
- 10772 Brion, C. E., Hamnett, A., Wight, G. R., and Van Der Wiel, M. J., Photoelectron Branching Ratios and Dipole Oscillator Strengths for Excitation, Ionization and Fragmentation of NH_3 up to 60 eV, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1188-1189 (1977).
- 10773 Balashov, V. V., Grum-Grzhimailo, A. N., Kabachnik, N. M., Magunov, A. I., and Strakhova, S. I., The Angular Distribution and Polarization of Photoelectrons in the Region of Autoionizing States of Neon and Argon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1192-1193 (1977).
- 10774 Rescigno, T. N., and Hazi, A. U., Ab-initio Study of the Photoionization of the Lowest ^3P State of Neon, (In) ICPEAC X: Abstracts of Papers of the Xth International Conference on the Physics of Electronic and Atomic Collisions (Paris, France, 21-27 July 1977), G. Watel, editor, Commissariat a l'Energie Atomique, Paris, **2**, 1204 (1977).

V. Author Index

Aashamar, K.	6508	8869				Bagus, P. S.	9061			
Abdallah Jr., J.	9256					Baille, P.	7239	10086	10628	
Abouaf, R.	7529	7882	8450	9509	10648	Bair, C. H.	9400			
	10651	10732				Balashov, V. V.	10773			
Ajello, J. M.	6749	8198				Baldy, A.	7055			
Ajmera, M. P.	7000					Balkis, T.	8411			
Al-Shamma, S. H.	10629					Baltayan, P.	7387			
Albat, R.	6698					Baltenkov, A. S.	9722			
Albert, K.	10031	10601				Baluja, K. L.	7498	8066	10039	
Aleksakhin, I. S.	6650	6686	6836	6994	7551	Band, Y. B.	7106	7311		
	8029	9804	10753	10754		Banerji, G.	8030			
Alguard, M. J.	9718					Banks, D.	7888	8255		
Ali, M. K.	9964					Banyard, K. E.	6548			
Allario, F.	9400					Barden, I. R.	7079			
Allcock, G.	8717					Bardsley, J. N.	6997			
Aller, L. H.	6561					Barends, D. H.	9397	10607		
Allman, S. L.	9851					Barfield, W. D.	7348	8734		
Ambartzumian, R. V.	7585	7861	8284	8359	8642	Barnes, K. S.	8255			
Amusia, M. Ya.	6824	7435	7467	7494	7506	Baronavski, A. P.	9304			
	7540	7546	7559	8036	8152	Barua, A. K.	6957	7097		
	8396	8399	8944	8946	8949	Bass, A. M.	8593			
	8967	9064	9494	9722	10447	Basu, D.	8030	8661	10610	
Andersen, H. C.	7863					Batenin, V. M.	10491			
Anderson, R. J.	9332	10443				Bates, D. R.	6554	8004		
Anderson, V. E.	7123					Bathke, C. G.	8078			
Andreev, E. P.	7542	9649				Batovskii, O. M.	9686			
Andreoni, A.	8640					Baulaigue, P.	7055			
Andrick, D.	6553	6833	7532	8730	10602	Baum, G.	8199			
Appelman, E. H.	9300					Beaty, E. C.	8378	9240		
Armstrong Jr., L.	7562	8032	9024	9302	9967	Beauchamp, J. L.	7582	9487		
	10769					Becker, W.	7449			
Arnold, J. O.	9482					Bederson, B.	9015	9326		
Arriola, H.	9059					Beenakker, C. I. M.	6542	6694	6695	6696
Ashihara, O.	6881	7503					8154			6697
Ashkin, M.	1908					Bekov, G. I.	7585			
Atabek, O.	9486	10184	10452			Belenov, E. M.	7432			
Aubert, D.	7055					Belevtsev, A. A.	9688			
Auerbach, D.	10024					Belic, D. S.	9806	10734	10748	
Ausloos, P. J.	7704					Belik, V. P.	10094			
Avrillier, S.	8714					Bell, K. L.	6568	6620	6786	7269
Aymar, M.	8320					Bender, C. F.	7397	8718	9331	10770
Azria, R.	6799	7029	10737			Benetti, P.	8639			
Baas, R. C.	9472									
Backx, C.	7900	8006	8080							

Bennani, A. L.	7147					Brader, D. F.	7975				
Bennett, R. A.	6736	6886	7476			Bradford, R. C.	7076	7405	7457		
Berezina, N. B.	7441	7540	8619			Bradley, D. J.	8035				
Berger, J. M.	10487					Brandi, H. S.	6692	7423	7518	7534	10623
Berkowitz, J.	7980	8983	9300	10182		Brandt, M. A.	6702	7597	8107	8195	8618
Bernauer, O.	7664						8620	9011			
Berrington, K. A.	6810	7509	7897	9460		Brandus, L.	8366				
Berry, R. S.	7902	7903				Brandsen, B. H.	6618	6742	6821	8197	8273
Bersohn, R.	9066						8313	8726	9022	9475	
Beswick, J. A.	9486	9858	9970			Branton, G.	8385				
Beyer, R. A.	8483					Brauman, J. I.	7351	7863			
Bhakar, B. S.	7031					Breen, F. H.	1362				
Bhaskar, N. D.	9015	9326				Breene Jr., R. G.	8504	10492			
Bhatia, A. K.	7442	7865	8250	9016	9833	Brenton, A. G.	7468	9809	10761		
	10591					Breuckmann, B.	8980				
Bhattacharyya, P. K.	6990	7859	8589			Breyer, F.	10771				
Bhattacharyya, S.	8077					Briggs, E. A.	8112				
Bhutani, K. K.	9344					Brion, C. E.	7595	8067	8352	8380	8385
Biondi, M. A.	9057	9847					8462	9259	9674	10772	
Birkinshaw, K.	10749					Broad, J. T.	7470	7604	8966		
Bitsch, A.	6553					Brongersma, H. H.	8960				
Blaauw, H. J.	7885	8402	9397	10607		Brook, E.	10747				
Black, G.	7637	9222	10129	10457		Brouard, J.	10642				
Blaha, M.	7384	7590	8914	9955		Brown, R. T.	7587	8112			
Blum, K.	7382	10174				Browning, R.	8948				
Bobashev, S. V.	10094					Bruels, M. C.	8617				
Bocvarski, V.	9257					Brunner, F.	9744				
Bodeur, S.	8740					Brunt, J. N. H.	8621	9298	10030	10738	10740
Boesten, L. G. J.	7888	9055				Bryant, H. C.	9683				
Bogachev, G. G.	6650	10753				Bucher, H.	8640				
Bogdanova, I. P.	6691	8253	10352			Buckley, B. D.	6793	9466	9652		
Bolduc, E.	6645	6831	7422	7496		Bui, T. D.	6800	7636	9342		
Bonham, R. A.	7115	8783	10616			Buimistrov, V. M.	8508				
Bonifield, T. D.	8963					Bullis, R. H.	10741				
Bonsen, T. F. M.	7888					Burciaga, J. R.	9965				
Bordonaro, G.	9043					Burdett, N. A.	10019				
Borie, E.	8558					Burke, P. G.	6810	7276	7277	7382	7509
Borrell, P.	9045						7511	7560	7897	8057	8333
Borst, W. L.	7114	7463	8964	9827			8773	9460	9466	10380	
Bottcher, C.	7079	8941				Burkova, L. A.	7535	10615			
Boulmer, J.	10448					Burnett, T.	6685	7898			
Bourg-Heckly, G.	6583					Burns, D. J.	10721				
Bozinis, D. G.	6700	6878	7547	7553	8316	Burrow, P. D.	8919				
						Bushnell Jr., D. L.	7056				
						Bussieres, N.	10163				

Byron Jr., F. W.	6507	6958	6998	7436	7519	Chantry, P. J.	10175				
	7573	7857	9041	9167	9168	Chapelle, J.	10356				
Cacak, R.	10024					Chapman Jr., F. M.	7022	9371	9746		
Cadez, I. M.	6593	7380	7528	7977	9014	Chatelet, J.	9495				
	10028	10451	10597			Chatterji, M.	7310				
Caldwell, C. D.	9724					Chau, F. T.	8694				
Calhoun, R. V.	8590	9802	10085	10611		Chaudhuri, J.	8871				
Callaway, J.	6552	6954	7383	7514	8332	Chekalin, N. V.	8359				
	8782	10022	10124	10485	10752	Chen, H.-L.	7148				
Camilloni, R.	7502	10606				Chen, J. C. Y.	7028	7392	7801		
Campbell, J. D.	8323	8739	9480			Chen, S. T.	8109	8461	8719	9219	
Campeanu, R. I.	6827	9299				Cheng, K.-T.	6823				
Campos, J.	9719					Cherepkov, N. A.	8036	8152	8399	8944	8949
Capezzuto, P.	9716						9023	9064	9494	9649	10093
Carette, J.-D.	6867	6907	7456	7545	8790	Cherepkov, N. K.	7435	7467	7506		
	8913	9479	9660	10178		Cheret, M.	9844	10640	10745		
Carlson, R. W.	6739	7134	7426	8060	8531	Chernysheva, L. V.	7467	7540	7546	7559	8152
Carlsten, J. L.	7471	8257	8339				8944	8946	9023		
Carnahan, B. L.	9834					Chesnyi, A. S.	9676				
Carre, M.	8968					Chibisov, M. I.	6725				
Carter, A. E.	6885	7123				Chinnov, V. F.	10491				
Carter, S. L.	7408	8037	8453	8947	10125	Chizhov, Yu. V.	6670				
Cartiaux, L.	9365					Chopra, P. D.	6617				
Cartwright, D. C.	7554	8641	8873	8918	9854	Choudhury, B. J.	7031				
	9913	9952	10593	10620	10621	Christian, C.	10031	10601			
Caudano, R.	7446	8491	10024			Chu, S.-I.	6989	8731			
Caudle, G.	9668					Chung, K. T.	7000				
Cavaliere, P.	9043					Chung, S.	7116				
Cederbaum, L. S.	9325	9723	9956			Chupka, W. A.	6708	7557	7980	8413	9484
Celotta, R. J.	6744	7056	10724			Chutjian, A.	6649	6951	7119	7271	7452
Center, R. E.	7148						7454	7461	7537	7858	8079
Cerjan, C. J.	8200						8494	8618	8641	9011	9832
Chamberlain, O.	6710						9854	9913	9952	10158	10593
Chan, F. T.	7118	8312	9040	9129			10621	10723			
Chan, Y. F.	8945					Cieslik, S.	6583				
Chandra, N.	6747	7421	7601	8275	8725	Clarke, E. M.	6872	7466	9668		
	9670					Codling, K.	7890	8059	8744	9334	9747
Chandra, S.	6544	6592	6791	6869	8022	Coggiola, M. J.	8785				
	8110	8134	8240	8736	8788	Coleman, J. P.	9022				
	9659	9807	10160	10161		Coleman, P. G.	7273	7575	8922	9965	
Chandrasekhar, S.	1362					Collin, J. E.	8354				
Chang, C. H.	7118	8312	9040			Collins, L. A.	8437	9241	9347	9459	10626
Chang, E. S.	9461	9675	9820	10029	10592	Combourieu, J.	9492				
Chang, J.-J.	6889	7561				Comer, J.	7455	7979	8919	8962	9673
Chang, T. N.	6512	6589	7133	9488	9850	Compton, R. N.	9296				
Chantrel, H.	7055										

Comtet, G.	10642					Daum, G. R.	7862	9220			
Connerade, J. P.	9483					Davenport, J. W.	8034	10455			
Cook, T. B.	7917	9132				Davies, D.	5874				
Cooper, J. W.	6744	7442				Davis, D. D.	9852				
Cooper, R.	10179					Davis, J.	7384	7507	7590	8737	8914
Copley, G. H.	7431						9955				
Corbin, R. J.	7137					Davis, S. L.	6652				
Corcoran, C. T.	8791	9745	10040	10091		De Heer, F. J.	6542	6694	6695	6696	6697
Cosby, P. C.	6736	6822	6886	7476	7477		7526	7884	7885	8154	8402
	8643	8923	9303	10126	10645		8784	8915	8957	8961	9062
	10646	10647	10648	10651			9344	9369	9393	9397	9678
							9837	10011	10164	10480	10607
Cotter, T. P.	9744						10632				
Cramarossa, F.	9716					De Jongh, J. P.	7504				
Crandall, D. H.	6546	6699	7445	7523	9962	De Leeuw, J. H.	8724				
	10750	10751				De Reilhac, L.	9489				
Cravens, T. E.	7078					De Witte, O.	9495				
Creel, C. L.	8031					Deaton, T. F.	6581				
Crees, M. A.	9291	10625				Debies, T. P.	8297				
Cromer, D. T.	8112					Dehmel, R. C.	7596				
Crowe, A.	6803	6955	7438	9655		Dehmer, J. L.	7238	10007			
Csanak, G.	8334					Dehmer, P. M.	6708	7557	8413	9484	
Cubeddu, R.	8639					Deigat, F.	10759				
Cukier, M.	6590					Delage, A.	6907	7456	7545	8790	8913
Cvejanovic, S.	10738	10739					9479	10178			
Czyzak, S. J.	6561					Deleanu, L.	7123	7124			
D'Agostino, R.	9716					Delon, P.	10735				
D'Albuquerque E Castro	10622					Delpech, J.-F.	10448				
Dabkiewicz, P.	7593					Denison, A. B.	7081				
Dahlgren, P. W.	9239					Depatie, D. A.	6581				
Dale, F.	9490					Devdariani, A. Z.	10454				
Dalgarno, A.	1927	6540	6683	6939	7001	Devos, F.	10448				
	7078	8200				Dewangan, D. P.	9244	10021			
Damany, N.	9489					Dewar, M. J. S.	6588				
Damburg, R. J.	7552					Dey, S.	6584	8353	9061	9340	9343
Dance, D. F.	9042						9473	9846			
Danch, F. F.	8738					Dhez, P.	6590	8071			
Danilevskii, N. P.	7460	8158	9255			Di Stefano, G.	9972				
Dankwort, W.	8781					Diana, L. M.	9965				
Dansh, F. F.	6834					Dibeler, V. H.	8338				
Darewych, J. W.	7239	10086	10628	10765		Dickinson, A. S.	7270	9127	9954		
Das, A. K.	8480					Dieterle, B. D.	9683				
Das, J. N.	8193					Dill, D.	6643	7555	10007		
Dashchenko, A. I.	6834	6880	7416	7444	8738	Dillon, M. A.	6608	6644	6944	9448	
Datz, S.	9261					Divine, T. F.	7398	7402			

Dixon, A. J.	6688	8274	8353	8959	9061	Ederer, D. L.	6582	6667			
	9340	9343	9473	9846	10025	Egger, F.	7539	8355	9828	9844	10640
	10604						10641	10745			
Docken, K. K.	6540	6735	7001			Ehrhardt, H.	6868	7616	10729	10744	
Doering, J. P.	7381	8192	8283			El-Kholy, S. B.	8157				
Dolder, K. T.	6549	6805	6870			Eland, J. H. D.	10182				
Dolzhirov, V. S.	8359					Elitzur, M.	9721				
Domcke, W.	9325	9723	9956			Ellefson, R. E.	7081				
Domenicucci, A. G.	9245					Ellison, G. B.	8969				
Donahue, J.	9683					Elston, S. B.	7513				
Donohue, D. E.	7451	9468	9469	9664		Eminyan, M.	6992				
Doolen, G. D.	7425	7898				Ensberg, E. S.	7051				
Dose, V.	7024					Erdevdi, N. M.	8463				
Doughty, N. A.	1792					Erko, V. F.	9959	10634	10635		
Dow, J. D.	10180					Estler, R. C.	8283				
Doyle, H.	6683	6939				Euwema, R. N.	6561				
Drachman, R. J.	8318					Ewart, P.	8035				
Drewitz, H.-J.	7992					Eyb, M.	6741	7466	7591		
Driver, R. D.	8038					Fabrikant, I. I.	7552	8356	8955	9648	
Drouet, M. G.	10092					Fairchild, C. E.	8982				
Drukarev, E. G.	6824					Faisal, F. H. M.	8449				
Drukarev, G. F.	7441	7453	8619	8978	10032	Fano, U.	7860				
	10736					Farago, P. S.	9293				
Du Bois, R. D.	6804	7434	7437	8735	9663	Faris, J. F.	6693				
	10644					Farnoux, F. C.	6590	7563	8186	8320	
Dube, L.	6701	7448	9130	10731		Feeney, R. K.	7398	7402			
Dufay, M.	8968					Felden, M. A.	8238	9341			
Dufton, P. L.	9460					Felden, M. M.	8238	9171	9341		
Dugan, C. H.	8035					Feldman, P. D.	8251				
Duguet, A.	7077	7703				Feldmann, D.	6669	6888	8185	9350	9376
Dulock Jr., V. A.	8382	8384					9511	9512	9689		
Dumanchin, R.	9495					Feltsan, P. V.	8692				
Dunbar, R. C.	7586	9028	9065	9372		Ferendeci, A. M.	6648				
Dunn, G. H.	6546	6699	6809	7445	7523	Ferrante, G.	9043				
	8917	9962	10644	10751		Fiamengo, N. A.	8873				
Dunning, F. B.	6666	7576	7917	9132		Fineman, M. A.	7596				
Durer, J. M.	7305	7527				Fink, M.	6806	6946	6996	7117	7388
Durup, J.	10650					Finn, T. G.	7381	8192			
Dutta, C. M.	9746					Fiquet-Fayard, F.	7529	7882	8331	8450	9242
Dutton, J.	6587	7468	9809	10761			9467	9839			
Duweke, M.	8451					Fischer, G.	7023				
Duzy, C.	7902	7903				Fisk, G. A.	8742				
Dwivedi, P. H.	9720					Flaks, I. P.	7495				
Dyachkov, L. G.	8662					Flannery, M. R.	6559	6792	7126	9058	9243
Eastman, D. E.	9491						9849	9966			

Flicker, W. M.	8785	10026				Gelebart, F.	8135	8716	8787		
Fliflet, A. W.	7606					Geltman, S.	1005	5581	8182		
Flowers, M. C.	8411					Gentieu, E. P.	7864				
Foltz, G. W.	9132					George, E. V.	7584				
Fon, W. C.	7511	8057				Gerzanich, G. Yu.	7462	9017			
Ford, A. L.	6540	6735	7001			Ghosh, A. S.	6796	6990	7406	7854	7859
Foster, G.	8055	8070	8181	8277	10009		8030	8589	8614	8661	8732
Foster, M. S.	7582						8871	9456			
Fournier, P. G.	10642					Gianturco, F. A.	8776	9297	9333		
Franklin, J. L.	7047	9657	10445			Giardini-Guidoni, A.	10606				
Fraser, P. A.	1792	6740	8965	9964		Gien, T. T.	8916	9667	9669	9842	
Freed, K. F.	7106	7311				Gillespie, E. S.	7275				
Freiser, B. S.	9487					Glass-Maujean, M.	9045				
Freund, R. S.	6790	6829	6830	7424	7975	Gleason Jr., R. E.	8963				
	9468	9469	9664			Glick, R. E.	7025	8985			
Frey, P.	10771					Glover, R. M.	8791				
Frey, R.	9349					Goddard III, W. A.	9971				
Frish, S. F.	8253					Goinga, M.	7458				
Frost, D. C.	8693					Golden, D. E.	9720				
Frueholz, R. P.	10026					Golden, J. E.	7541	9822			
Fryar, J.	8155	9293				Goldovskii, V. L.	8463	9262			
Fujita, I.	8722	8733				Goldwire Jr., H. C.	6666				
Fujita, T.	9650	9654	10636			Golodovsky, V. L.	7129				
Fukuda, K.	7130	8367				Golovchak, N. V.	7129				
Fukui, K.	8722	8733				Gomet, J.-C.	7855				
Furzikov, N. P.	7861	8642				Gordeev, Yu. S.	7542				
Fuss, I.	10025	10605				Gorokhov, Yu. A.	8284	8642			
Gaillard, M. L.	8968					Gorshkov, V. G.	6824				
Gaily, T. D.	8943	10024				Gostev, V. A.	10756				
Gaines, A. F.	8411					Gotchev, B.	9349				
Gallagher, A.	7053	7549	7599	7600	8109	Gram, P. A. M.	9683				
	8461	9219				Green, A. E. S.	6703	7379	8382	8383	8384
Gardner, A. B.	6580						10087	10088	10449		
Gardner, J. L.	7131	7136	7352	9684		Greene, T. J.	6607	6789			
Gardner, M.	9763					Gregory, D.	6806	6996	9962	10751	
Garga, I. I.	6836					Gresteau, F.	7450	8937	9829	10028	10596
Garibotti, C. R.	10764						10597	10598	10722		
Garstang, R. H.	7443					Grieser, F.	10179				
Garvey, R. H.	10087	10088	10449			Griffith, T. C.	7273	7575	8922	10762	
Gau, J. N.	7856	10124	10351	10752		Grossman, L. W.	9851				
Gaucherel, P.	9823					Gruen, N.	6698				
Gavrila, M.	8729					Grum-Grzhimailo, A. N.	10773				
Gee, C. S.	8054					Gryzinski, M.	6828	6871			
Gehenn, W.	9953	10600				Gudat, W.	9491				

Guha, S.	7854					Hay, P. J.	8179	8180		
Guidoni, A. G.	7502					Hayashi, S.	8436	8721	9396	9653
Gulyaev, R. A.	10013					Hayes, E. F.	9371	9746		
Gupta, A.	9960					Hayes, M. A.	6547	9607	9961	
Gupta, S. C.	6555	6860				Hayhurst, A. N.	10019			
Gurev, V. I.	9686					Hays, G. N.	8742			
Gurev, Yu. S.	8252					Hazi, A. U.	10122	10130	10630	10774
Gurtler, P.	9462	10183				Hebner Jr., R. E.	7137			
Guskov, Yu. K.	10357					Heddle, D. W. O.	6617	9013		
Gustafsson, T.	9491	10018				Heffington, W. M.	8745			
Guyon, P. M.	7474	7980	9045			Heideman, H. G. M.	6560	7458	7888	8588
Haasz, A. A.	8490	8724					9055	9398	10743	8940
Haddad, G. N.	7558	8872	9684			Heidrich, J. L.	7475	7477		
Haensel, R.	6538					Heindorff, T.	7593	10031	10601	
Hafidh, Z. A.	7046					Heinicke, E.	6888	9350	9511	9512
Hahn, Y. B.	6802					Heinzmann, U.	9047			9689
Hahn, Y.	9447	9841	10006			Helmy, E. M.	9133			
Hall, R. I.	6593	6993	7119	7450	7454	Henry, R. J. W.	7602	8272	8276	8591
	7464	7528	8918	9014	9260		8789	10124	10177	10351
	9467	9829	9839	10028	10442	Herbst, E.	6579	8969		10752
	10596	10597	10598	10722	10735	Hermann, H. W.	8979	9169		
Halpern, J. B.	7307	8323	8739			Herrick, D. R.	9664			
Hambro, A. K.	6508					Herrmann, D.	6946	7117	7388	
Hambro, L.	8869					Hertel, I. V.	8979	9169		
Hamdan, M.	10749					Hertz, H.	7304			
Hamley, J. R.	9747					Herzenberg, A.	6557	6701	7448	9130
Hamnett, A.	7595	8352	8385	8462	10772					10731
Hancock, G.	7307	8323	8739	9480		Hesselbacher, K. H.	9240			
Hancock, W. H.	9687					Hewson, P.	8241			
Hanne, G. F.	8028					Heyland, G. R.	7273	7575	8922	10762
Hansen, J. E.	9027					Hibbert, A.	8772			
Hanson, R. K.	8481					Hicks, P. J.	7455	7457	7979	8962
Harker, A. B.	9743					Hildenbrand, D. L.	10176			9673
Harland, P. W.	7047					Hille, E.	10745	10746		
Harris, F. M.	6587	7468	9809	10761		Hilton, P. R.	8358	10128		
Harrison, M. F. A.	6688	8959	10747			Hirota, F.	8743			
Hartfuss, H. J.	8920	10008	10637			Hirotsu, T.	8722			
Hartnagel, H. L.	7046					Hirsch, R. G.	7049			
Hashim, M. A.	7309	9680				Ho, W.	9743			
Hashimoto, H.	10034					Ho, Y. K.	6740	8965	9327	
Hashino, T.	9808					Hofft, J.	7593			
Hasted, J. B.	6906	9368	10749			Hofmann, H.	6741			
Hata, J.	7393	9039				Hofsaess, D.	9264			
Hatano, Y.	7594	9658	10631			Hol, V. M.	6560			
						Holmes, J. K.	6872	9668		

Holt, R. A.	8943					Iwai, T.	9650	9654	10636		
Hong, S. P.	9133	9240				Jackman, C. H.	10087	10088	10449		
Hood, S. T.	6527	8352	8462	10025		Jacobs, V. L.	8250				
Hooper, J. W.	7398					Jaduszliwer, B.	6801	9015	9326		
Hotop, H.	10771					Jaegle, A.	7077	7703			
Houlgate, R. G.	7890	8059	8744	10180		Jaegle, P.	6590				
Houston, P. L.	8322					Jaffe, R. L.	9482				
Howerton, R. J.	8112					Jain, D. K.	7500	8317	10159		
Huang, J. T. J.	9129					Jain, N. K.	7145	8022	8268	9606	10160
Hubbell, J. H.	8112					Jamieson, M. J.	6505	7978	9019	9128	
Huber, B. A.	9303	10645	10648	10651		Janes, G. S.	7603				
Huber, M. C. E.	6668					Jansen, R. H. J.	7884	7885	9472	10480	
Hubin-Franskin, M.-J.	7691	8354				Jefferts, K. B.	7051				
Huebner, R. H.	7056					Jeffries, J. B.	10644				
Huebner, W. F.	7348					Jensen, S.	10379				
Huetz, A.	6751	6832	7450	7520	7521	Jesion, G.	7720	10733	10742	10760	
	8267	8937				Jhanwar, B. L.	6807	7389	8939		
Hughes, V. W.	9718					Jimbo, Y.	7497				
Humberston, J. W.	6827	9299				Jimenez, E.	9719				
Hummer, C. R.	10721					Jivery, W. T.	7557				
Hunter, G.	6506					Joachain, C. J.	6507	6958	6998	7436	7519
Huntress Jr., W. T.	8198						9041	9167	9168	9365	10035
Hurst, G. S.	9851						10613				
Hush, N. S.	8358	10128				John, T. L.	1000	1795	2503	5364	5461
Hutt, P. K.	6618	6726	8956				5757	5874	5876	6401	6517
Hyman, H. A.	5567	9485					6518	6606	6901	7913	8507
Igawa, H.	6883	6884					9018	9830	10017	10089	10090
Ihle, H. R.	10027					Johnson, K. E.	10119				
Imami, M.	7114	7463				Johnson, L. P.	8153				
Imre, A. I.	6834	6880	7395	7416	7444	Johnson, P. M.	10091				
	8738					Johnson, S. G.	9261				
Inghram, M. G.	6724	7052				Johnson, W. R.	6823	9681			
Inokuti, M.	7238					Johnston, H. S.	8397				
Isaka, S.	7146					Jones, J. D. C.	10229				
Isakov, V. A.	7432					Jones, J. D.	7137				
Ishihara, T.	7028	7392	7801			Jones, L. A.	10118				
Islam, M. M.	8956					Jones, M.	6598				
Issa, M. R.	6742	9475				Jones, R. A.	6587	7468	9809		
Itikawa, Y.	8769					Jortner, J.	9486	9858			
Ito, K.	10631					Jost, K.	6946	7117	7388	10608	
Itzkan, I.	7603					Jourdain, J. L.	9492				
Ivanchoy, P. G.	6994					Joyez, G.	6832	7520	7521	8267	8937
Ivanov, V. K.	7559	8396	8946	8967	10447		9260				
Ivanov, V. S.	8495					Judge, D. L.	6739	6887	7098	7134	7426
							7760	8060	8531	8625	9221
							9510	9848	/		

Julienne, P. S.	7507	9763				Keyser, C. J.	8491	10024		
Jung, K.	6868	7616	10729	10744		Khakhaev, A. D.	10756			
Junker, B. R.	6647	9822				Khare, S. P.	6807	7389	7500	8317
Jureta, J.	10739						8939	9508	10016	10159
Jusick, A. T.	8383						10495	10618		10354
Kaandorp, J. P. J.	8729					Khayrallah, G. A.	7524	8266	8719	8921
Kabachnik, N. M.	8452	10773					10609			9394
Kabanov, S. P.	8779					Khilko, I. N.	10012			
Kadota, K.	6619	9060				Kieffer, L. J.	7094			
Kaegi-Nardone, M. C.	10492					Killeen, T. L.	7273	7575		
Kaiser, H. J.	6888	9350	9511	9512	9689	Kim, Y.-K.	8108	8379		
Kaldor, U.	9840	10627				King, G. C.	7076	7405	7457	8621
Kallne, E.	8071	10118					10030	10740		9298
Kalman, O. F.	9349					Kingston, A. E.	6568	6620	6786	7269
Kamal, A. N.	8178						8057	9019	9128	9460
Kandel, R.	806	2220				Kirby-Docken, K.	8200			
Kaneko, Y.	6619	9060				Kirchner, N.	8451			
Kaplan, I. G.	8082					Kishko, S. M.	7377			
Karo, A.	9763					Kivel, B.	5567	8503	8505	9474
Karstensen, F.	7030					Kleimenov, V. I.	6670			9493
Kasdan, A.	6579					Kleinpoppen, H.	6992	10174	10629	
Kasting, G. B.	8695					Kley, D.	9126			
Kasyanov, V.	8506					Klonover, A.	9840	10627		
Katihabwa, J.	7691	8354				Klump, K. N.	6563	10010		
Katriel, J.	8723					Klyucharev, A. N.	8258	10454		
Kauppila, W. E.	7720	10733	10742	10760	10767	Kobzev, G. A.	8662			
Kavei, G.	10727					Koch, E. E.	9462	10183		
Kawasaki, M.	9066					Kocher, C. A.	9717			
Kay, R. B.	6812					Kockarts, G.	8398			
Kazachkov, M. P.	6824					Kohl, J. L.	8033			
Kazakov, S. M.	8252					Koike, F.	7976	9056		
Keesing, R. G. W.	9013	9191				Kollmann, K.	6788	10633		
Kelly, H. P.	6510	6889	7135	7408	7606	Kolodner, P.	9173			
	7862	8037	8306	8453	8947	Komornicki, A.	6588			
	9027	10125				Kompa, K. L.	9744	9853		
Kelman, V. A.	6880	7395	7416	7444	8738	Kondow, T.	10639			
	9958					Kontros, J. E.	7543			
Kennedy, D. J.	10113					Kontrosh, E. E.	8357			
Kennedy, J. V.	10038					Koppe, V. T.	7460	8158	9255	
Kennerly, R. E.	8783	10616				Korchevoi, Yu. P.	10012			
Kepple, P. C.	7590	8737	8914	9955		Korol, V. I.	7377			
Kessler, J.	7388	8028	9172			Korotkov, A. I.	8252	10014		
Keto, J. W.	8963					Kotochigova, S. A.	9685			
Kets, F. B.	9398					Kouchi, N.	10631			
						Koura, K.	7096			

Kovac, R. M.	7402					Lassette, E. N.	6563	6608	6644	9448	10010
Koval, A. G.	7460	8158	9255			Lassey, K. R.	9061	9846			
Koyano, I.	6738	8774				Latimer, C. J.	7917				
Kozlov, M. G.	9685	9855				Latour Jr., L. J.	7857				
Kraidy, M.	6740					Laufer, A. H.	8593				
Krause, H. F.	9261					Laughlin, C.	8005				
Kronebusch, P. L.	8983					Lawrence, G. M.	7522	8982	9126		
Krotkov, R.	8156					Lawton, S. A.	7513				
Kruger, C. H.	8481					Le Bras, G.	9492				
Kruger, H.	8559	9668				Le Coat, Y.	10737				
Kruse, S.	8482					Le Dourneuf, M.	7277	7509	7561	8772	8786
Krylov, B. E.	9855						9238	10124	10380		
Kuchitsu, K.	7433	8436	8721	9396	9653	Lebow, L.	8771				
	10639					Lecas, M.	7147				
Kulagin, V. D.	9446					Ledford Jr., A. E.	8593				
Kulander, K. C.	9838					Ledovskoi, V. P.	9661				
Kumar Jr., A.	9508	10618				Lee, C. M.	6642	9671			
Kumar, A.	10016					Lee, C. S.	7431				
Kumar, S.	6594	6745	7125	8024	9960	Lee, E. K. C.	8792				
Kunc, J.	10117					Lee, E. T. P.	7116				
Kunitomo, T.	9301					Lee, L. C.	6739	6887	7098	7134	7426
Kuntzemuller, H.	8069	8071					7760	8060	8531	8625	9221
Kuppermann, A.	6646	7556	8785	10026			9510	9848	9969	10457	
Kupriyanov, S. E.	8779					Lee, S. T.	8693				
Kurepa, M. V.	6956	7380	7977	8068	9257	Lee, Y. T.	8414	8741	9025	9463	10127
	9806	10724	10734	10748		Leep, D.	7549	7599	8109		
Kuriyan, M.	6506					Lefavre, D.	7901				
Kutcher, G. J.	6703	7379				Lefebvre, R.	9486	10184	10452		
Kuwata, K.	8722	8733				Lefevre, G.	10737				
Kuyatt, C. E.	6744	7056	8715			Lenzi, M.	7307	9972			
Lakshminarayana, V.	7889					Leonov, S. N.	10037				
Lal, M.	10020	10612				Leroy, B.	9492				
Lamoureux, M.	8186					Letokhov, V. S.	7585	7861	8284	8359	8642
Lan, V. K.	7277	7509	7561	8772	9238	Leveau, J.	10759				
	10124	10380				Levin, F. S.	9239				
Landau, M.	6751	6832	7520	8267		Levin, L.	7603				
Lane, N. F.	1927	6550	7896	8437	9459	Levin, V. G.	6882	8720			
	9835					Levy, D. H.	7306				
Lang, J.	7407					Levy, R. H.	7603				
Langenberg, A.	7544					Lewis, B. R.	6541				
Langendam, P. J. K.	8729					Lewis, D. M.	9809				
Langhans, L.	6833	7532	8730	10602		Lewis, J. W. L.	6689				
Langhoff, P. W.	8791	9745	10040	10091	10456	Leycuras, Y.	7048				
	10770					Lin, C. C.	7116				
Langhoff, S. R.	9482	9745									

Lin, C. D.	6991	9681				Mahan, A. H.	7600				
Lin, C.-P.	6823					Mahan, B. H.	8414	8741	9025	9463	10127
Lin, S. L.	6997					Maiti, N.	8480	8732	9346		
Lincke, R.	9027					Makarov, G. N.	8284	8642			
Lindau, I.	8183					Makeev, G. N.	8081				
Linder, F.	6798	7447	7532	8727	8728	Maksic, R.	10757				
Lineberger, W. C.	6579	7471	7472	8969	8984	Malinovsky, M.	7899				
	9725	10768				Manalis, M.	6667				
Ling, J. H.	8256	8923	10647			Mandal, P.	7274	7406	8661		
Lins De Barros, H. G. P	6692	7423	7518	7534	10622	Mandelbaum, D.	7505	8251			
	10623					Mandelman, M.	9481				
Lipsky, S.	10119					Mandl, A.	8319	9026			
Litvak, H.	9066					Mann, J. B.	9607	10123			
Liu, J. W.	9063					Manson, S. T.	6511	6643	6890	7555	9220
Llewellyn, J. A.	7025						9243	9302			
Locht, R.	6543	7305	7527	7691	9477	Marchand, P.	8395	10589			
Lodge, J. G.	8054					Margani, A.	9972				
Lorents, D. C.	7637					Margrave, J. L.	9657	10445			
Los, J.	7308	10164	10632			Mark, T. D.	7113	7538	7539	8355	9828
Lossing, F. P.	10381						9844	10640	10641	10745	10746
Lott III, D. E.	7025					Markin, A. P.	8082	8464			
Lubell, M. S.	9718					Marmet, P.	6645	6831	6861	7422	7496
Luc-Koenig, E.	8320						7901	10163			
Lucas, C. B.	9172					Marr, G. V.	8184	8744	10180	10453	
Lucatorto, T. B.	6582					Martin, I.	6737				
Luczynski, Z.	7635					Marusin, V. D.	6691	10352			
Lukac, P.	7440					Massaro, P. A.	7517	10764			
Lukashenko, S. N.	10012					Matei, F. F.	6834				
Lukashenko, V. I.	10012					Matese, J. J.	8591				
Luken, W. L.	9484					Mathis, R. F.	7598				
Lum, R. M.	7349					Mathur, D.	6906	9368			
Luyken, H. J.	7885					Mauclair, G. H.	9348	9856	9857		
Lyman, J. L.	7607					Maximon, L. C.	8558				
Lynch, M. J.	6580					Maya, J.	10181				
Maas, J. G.	7308					Mazeau, J.	6832	7520	7521	8267	8937
MacAdam, K. B.	6992						9260	9829	10596	10598	10722
Maceda, E. L.	8078					McAfee Jr., K. B.	7349				
Macek, J.	7856					McCann, K. J.	6792	7126	9849		
Macpherson, M. T.	10041					McCarthy, I. E.	6527	6584	8274	8353	9061
Madan, R. N.	6808	7386					9340	9343	9471	9473	9476
Madden, R. P.	6582						9846	10604	10605		
Madison, D. H.	7498	8590	9802	10085	10611	McConkey, J. W.	6545	6803	8155	8717	9293
Maeda, K.	9656						9655				
Magunov, A. I.	10773					McCulloh, K. E.	8338	8775	10381		
						McCurdy Jr., C. W.	6551	7396	7397	7605	8058
							8718				

McDonald, J. R.	9304					Mitchell, J. B. A.	10024	10755		
McDowell, C. A.	8693	8694				Mitra, C.	8493	9345		
McDowell, M. R. C.	1750	1890	6750	6838	6839	Mittleman, M. H.	10015			
	6954	7391	7404	7574	8273	Mityureva, A. A.	6835			
	8623	8782	8956	9292	9678	Miyamoto, A.	8111			
	9801	10022	10038	10039		Miyazaki, K.	7130	8367		
McEachran, R. P.	8945	9263	10766			Mjolsness, R. C.	8560			
McFarland, R. H.	8239					Mnatsakanyan, A. K.	9688			
McGowan, J. W.	6872	7446	8491	9012	10024	Mohlmann, G. R.	7526	8154	8784	8915
	10755						8961	9062	9344	9393
McGreevy, E.	9831						10011	10164	10632	9837
McGuire, E. J.	8592	9665	9666			Moisan, M.	10450			
McGuire, J. H.	7541	8318	9822			Molina, L. T.	10359			
McIlveen, W. A.	6568	6620	6786			Molina, M. J.	10359			
McKen, D.	8083	9265				Molinari, E.	9716			
McKoy, V.	6551	6999	7263	7396	7397	Mollenkamp, R.	10608			
	7605	8058	8718	9331	10770	Monahan, K. M.	6749			
McNutt, J. D.	9965					Monat, J. P.	8481			
McPherson, D.	7402					Moore, C. B.	8322			
Mehlhorn, W.	8980					Moore, J. H.	9240			
Mendez-Moreno, R. M.	9365					Moores, D. L.	8271	9291	10625	
Mentall, J. E.	7474	7864	8479	10638		Moos, H. W.	9351			
Meron, E.	8723					Morgan, D. J.	5757	5874	6401	6517
Meunier, G.	8968					Morgan, D. L.	9263			
Michejda, J. A.	8919					Morgan, H. D.	8479	10638		
Michon, M.	9495					Morgan, L. A.	6750	6838	6954	6995
Mielczarek, S. R.	7056	8715					7403	7574	8782	9801
										10022
Mikhailov, A. A.	8770					Morgenstern, R.	9329			
Mikoushkin, V. M.	7495					Mori, K.	7904			
Mileev, V. N.	7583	10619				Morrison, J. D.	8153	9682		
						Morrison, M. A.	7896	8437	9241	9459
Miletic, M.	10757						9836			9835
Miley, G. H.	8078					Morrison, W. F.	6559			
Milhaud, J.	6558	7127				Moseley, J. T.	6736	6822	6886	7475
Miller, D. L.	10180						7477	8256	8643	8923
							10126	10645	10646	10647
Miller, D. R.	7596						10651			10648
Miller, J. L.	7584					Mosher, O. A.	8785	10026		
Miller, K. J.	6562	6873	8336	9245		Moskalenko, N. I.	9968			
Miller, T. M.	7475	8256				Moskvina, Yu. V.	8532			
Mintz, D. M.	7556					Mount, G. H.	9351			
Mirza, M. Y.	8412					Msezane, A.	6890	9302		
Misakian, M.	6693					Mukamel, S.	9486			
Mishin, V. I.	7585					Mulloney, T. J.	10768			
Missavage, D. W.	9220					Mumma, M. J.	6693	7095		
Mital, H. P.	8788	9659	9807							

Munoz, J. M.	9954					Oda, N.	7501	7594	9056	9254	10603
Murat, K.	8723						10631				
Myerscough, V. P.	1750	1890	6750	6838	7391	Ogawa, M.	6739	7134	7759	7760	
	7574	9801	10038			Ogawa, S.	7759				
Nachman, J.	8723					Ogura, K.	9650	9654	10636		
Nakashima, A.	6801					Ogurtsov, G. N.	7494	7495			
Nakazaki, S.	7592	9044	9808			Ohmura, H.	1366	1367			
Narain, U.	6544	6592	6791	6869	7145	Ohmura, T.	1366	1367	10486		
	8022	8110	8134	8268	8295	Ojha, S. P.	7309	9680			
	8616	8736	8788	9606	9659	Olsen, A.	10121				
	9807	10160	10161			Olsen, H.	8558				
Nardone, M. C.	8504					Olsen, L. A. R.	9259				
Narumi, H.	6597	8111				Omidvar, K.	8318				
Nascimento, M. A. C.	7263	9971				Onda, K.	8365				
Nayak, R. M.	8615					Oosterhoff, L. J.	6696	6697			
Nedelec, O.	7387					Oppenheimer, M.	6683	6939			
Nenner, I.	6945					Oraevskii, A. N.	7432				
Nepiipov, S. I.	10754					Ormonde, S.	9131				
Nepiypov, E. I.	6651	7128	7129	7272	10084	Orth, R. G.	9028	9065	9372		
Nesbet, R. K.	6509	6988	7385	7419	7508	Osterlitz, B. A.	7081				
	7536	8335	8786			Osumi, M.	9301				
Neudatchin, V. G.	6882					Ottinger, C.	7053				
Neumann, J.	8920					Ottley, T. W.	7027	7493	8381	8981	9246
Newell, W. R.	7548	9651	10590				9826	10727	10728		
Ng, C. Y.	8414	8741	9025	9463	10127	Oza, D. H.	10124	10752			
Ng, E. W.	7115					Ozenne, J. B.	10650				
Nguyen, B.	7147					Ozgen, G.	8411				
Nicholls, R. W.	9481					Ozgen, I. T.	8411				
Nicolet, W. E.	10484					Pabst, R. E.	9657	10445			
Niehaus, A.	9329					Padalia, B. D.	8615				
Nienhuis, G.	6560	8588	8940			Page, B. A. P.	8622				
Nishikawa, S.	7473					Pai, M.	8241				
Nishimura, F.	7501	9056	10603			Paikeday, J. M.	8196				
Noble, C. J.	8273	8313	8726	9471	10604	Paineau, R.	7529	7882			
	10605					Paiziev, A. A.	9722				
Nogueira, J. C.	7465	8023				Palenius, H. P.	8033				
Norcross, D. W.	9347	9607	10626	10768		Palmer, R. L.	9012	9170			
Nordholm, S.	8358	10128				Pancel, M.	10650				
Norman, G. E.	8662					Pande, A. K.	10162				
Novick, S. E.	10768					Pandey, R. A.	8624				
Nowak, A. V.	7607					Pang, K. D.	6749				
Nuttall, J.	7425					Parikh, M.	7881				
Nygaard, K. J.	6596	6682	6802	7137	9369	Parkin, A.	9013				
O'Neil, S. V.	8969	10091				Parkinson, W. H.	8033				
Ochkur, V. I.	7535	10615									

Parks, G. E.	8745					Pichanick, F. M. J.	7513							
Parlant, G.	8331	9690				Pichou, F.	6751	6832	7520	7521	8267			
Parnell, G.	9805						8937							
Parr, A. C.	6724					Pike, C. T.	7603							
Parr, G. R.	6539					Pindzola, M. S.	6510	7135	8306	9016	9457			
Patterson, G. D.	6709					Pivovar, V. A.	8770	10037						
Paul, D. A. L.	6801	6868	7616	8771		Plantenga, F. L.	8561							
Paulson, J. F.	9490					Plummer, E. W.	9491							
Pavlichenko, O. S.	9959	10634	10635			Poe, R. T.	6512	6684	7133					
Pavlin, I.	9494					Poet, R.	7510							
Pavlitchenkov, A. V.	6882	8720				Pohl, J.	6858							
Pavlov, P. A.	7401					Pol, V.	10733	10742	10760	10767				
Payne, M. G.	9851					Poling, R. E.	7597							
Peach, G.	851	10483	10494			Pollak, H.	9349							
Peart, B.	6549	6805	6870			Polyakova, G. N.	7525	9959	10634	10635				
Peatman, W. B.	7588	8695	9349			Popova, T. N.	9399							
Pebay, J.	7147					Popp, H.-P.	8482							
Peek, J. M.	10123					Postoi, E. N.	6994	8029						
Peeters, P. H.	8940					Potter, J. E.	9720							
Peixoto, E. M. A.	7465	8023				Poulet, G.	9492							
Pejcev, V. M.	7380	7977				Powell, H. M.	6689							
Pejcev, V.	8981	9246	9826	10120	10727	Pozdneev, S. A.	10736							
	10728					Pradhan, A. K.	7887	8780						
Penkin, N. P.	6835					Prasad Rao, A. D.	9134							
Penner, S. S.	8745					Prema Chand, K.	7889							
Percival, I. C.	8054	9478				Presnyakov, L. P.	6743	7400						
Peresse, J.	8135	8716	8787			Preston, J. A.	6545							
Pernot, C.	10650					Price, L. L.	6689							
Perov, A. A.	8779					Prins, J.	8588							
Perry, D. L.	9657					Proch, D.	9744							
Petersen, H.	6538					Pullen, B. P.	6885	8958						
Peterson, J. R.	6736	6886	7471	7476	7477	Purdie, A. F.	8035							
	8643	8923	9303	10645	10646	Puretsky, A. A.	7861	8284	8642					
	10647					Quemener, J. J.	7422							
Peterson, J. T.	10185					Rabalais, J. W.	8297							
Peterson, L. R.	8383					Rabheru, A.	8956							
Petitdidier, M.	6583					Rackwitz, R.	6888	9350	9511	9512	9689			
Phaneuf, R. A.	6546	6699	7445	7523	8917	Radchenko, R. V.	8177							
	9962	10750	10751			Radha Krishna Murty, V.	7889							
Philen, D. L.	9852					Radler, K.	6538							
Phillips, B. A.	9471					Radojevic, V.	8036	8949	9064	9494				
Phillips, E.	8625	9221	9510	9848		Rahman, N. K.	8449	9297						
Phillips, J. M.	7081					Rai Dastidar, K.	8194	8870						
Pianetta, P.	8183													

Rai Dastidar, T. K.	8194					Rohulitch, V. S.	7444				
Rai, D. K.	6748	8056	9295	9470		Roig, R. A.	7409				
Raith, W.	8199					Roll, H.	10008				
Rama Rao, J.	7889					Romanenko, V. I.	7432				
Rambidi, N. G.	9676					Romanjuk, N. I.	10754				
Ranson, P.	10356					Rosen, H.	6710				
Ranyuk, A. I.	9959	10634	10635			Rosenstock, H. M.	10381				
Raoul, D.	7048					Rosner, S. D.	8943				
Rassi, D.	8981	9246	9826	10120	10727	Ross, J.	8031				
	10728					Ross, K. J.	7027	7493	8381	8981	9246
Ratto, J. J.	9743						9826	10120	10727	10728	
Ravishankara, A. R.	9852					Rountree, S. P.	6685	7898	9803	9805	
Ravodina, O. V.	9399					Rousseau, D. L.	6709				
Ray, S.	6957	7097				Rowe, B.	9823				
Rayermann, P.	8198					Roy, A. C.	8330	9192	10610	10763	
Read, F. H.	7076	7405	7457	8621	9298	Roy, D. N.	10355				
	9330	10030	10738	10740		Roy, D.	6867	6907	7456	7545	8790
Rebbert, R. E.	7704						9458	9479	9660		
Reddy, D. K. S.	7889					Roy, T.	8077				
Reed, K. J.	7351	7863				Rozsnyai, B. F.	7469				
Rees, J. A.	6555	6860				Rudd, M. E.	6804	7434	7437	8735	9663
Register, D.	6684					Rudge, M. R. H.	6746	8193	8269	8935	9825
Reichert, E.	8451	9953	10031	10600	10601		10495				
Reid, R. H. G.	9019	9128				Rundel, R. D.	6666	7576			
Reiland, W.	8979	9169				Ruppel, H. M.	8560				
Reilman, R. F.	9302					Rustgi, O. P.	9680				
Reinhardt, J.	6751	7450	9260			Ryabov, E. A.	8359				
Reinhardt, W. P.	7470	7604	8966	8969	10091	Ryman, A. G.	9263	10766			
Rescigno, T. N.	6551	6999	7396	7397	7605	Sacchi, C. A.	8639				
	8058	8718	9258	9331	10122	Safin, V. I.	7583	10619			
	10130	10770	10774			Saha, B. C.	6796	7274	7512	8614	8871
Ricard, A.	10450						9395				
Richards, D.	7270	8054	9478			Saile, V.	9462	10183			
Richardson, J. E.	8178					Saito, M.	6883	6884			
Richmond, B. L.	6559					Saitsev, Yu. V.	10756				
Rigaud, P.	9492					Sale, F. R.	10121				
Riggin, M.	7586	9065	9372			Saloman, E. B.	6582				
Riley, M. E.	7026	8314				Salop, A.	8936				
Robb, W. D.	6595	6685	7443	7550	7897	Samoilov, V. P.	7394	9662	9677	9742	
	7898	9607	10177			Samson, A. V.	10005				
Robbins, D. E.	8296					Samson, J. A. R.	7131	7136	7352	7558	8872
Roberts, M. J.	8270	9507					9684	9687			
Robrlish, P.	6710					Sandeman, R. J.	6668				
Rohr, K.	6798	7447	8728	9294	9605	Sandner, N.	8069	8071			
	9672	10033	10595	10726		Sangster, D. F.	10179				

Sarkar, K.	8614					Semenova, I. V.	10358				
Sauer Jr., M. C.	10179					Senashenko, V. S.	10617				
Savvov, R. V.	10357					Seng, G.	7532	8727			
Saxon, R. P.	7238	8256	10648			Sepman, V. Yu.	8258				
Sayle II, W. E.	7398	7402				Sergeev, V. M.	9845	10758			
Sazhina, I. P.	8452					Shafranyosh, I. I.	6686	7551	9804		
Schemelinin, S. G.	7542					Shannon, S. P.	9334				
Scheps, R.	7053					Shapiro, M.	9370	9970			
Schermann, C.	7528	9014	9467	9839	10735	Shapiro, S. G.	7435	7467	7495	7506	8152
Schermann, J.-P.	8714						8944				
Schiavone, J. A.	6790	6829	6830	7424	7975	Shardanand	9134				
	9468	9469	9664			Sharifian, H.	9683				
Schinke, S. D.	10359					Sharon, R.	9970				
Schinkowski, D.	9047					Sharp, J. M.	7455	7979			
Schlag, E. W.	9349					Sharpless, R. L.	7637	9222	10129	10457	
Schmid, W. E.	9853					Sharpton, F. A.	10443				
Schmidt, V.	8069	8071				Shaw, M. J.	10229				
Schmillen, A.	10637					Shchemelinin, S. G.	9649				
Schmitz, W.	8980					Sheftel, S. I.	7495	7546	9649		
Schmocker, U.	7024					Sheinerman, S. A.	8396	10447			
Schmoranzner, H.	10649					Shelton, W. N.	7498	8590	9802	10085	10611
Schneider, B. I.	6811	8179	8180	9836	9957	Shevelko, V. P.	8942				
Schneider, H. D.	8920					Shimamori, H.	9658				
Schneider, K. R.	7079					Shimamura, I.	6881				
Schneider, M.	7030					Shimizu, R.	10034				
Schnell, W.	7023					Shimon, L. L.	7128	7129	7272	7543	8463
Schon, S.	8451	10031	10601				9262	10084			
Schopman, J.	6543					Shingal, R.	10036	10354	10446		
Schrader, D. M.	8241					Shirley, D. A.	9046				
Schubert, E.	6868	7616	10729	10744		Shiu, Y.-J.	9057	9847			
Schuck, A.	10744					Shmaenok, L. A.	10094				
Schulz, G. J.	6558	6799	6945	7029		Shobha, P.	6807				
Schulz, M.	8559					Shore, B. W.	6819				
Schweig, A.	6588					Showalter, J. G.	6812				
Scofield, J. H.	8793					Shpenik, O. B.	8357	10754			
Scott, T.	6839	7404	8273	8623	9292	Shtoik, A. G.	8177				
	9801					Shuttleworth, T.	7548	9651	10590		
Seaton, M. J.	6556	8337	9961			Shyu, J. S.	6511				
Seddon, G. J.	6548					Sides, G. D.	9963				
Seguin, H. J. J.	8083	9265				Siegel, M. W.	10643				
Seitel, S. C.	7522					Sil, N. C.	6796	7274	7406	7512	8330
Sele, G.	7024						8480	8493	8732	9192	9345
Selim, E. T. M.	8157	10444					9346	9395			
Selwyn, G. S.	8397					Silver, A.	7865	10591			

Simons, G.	6737					Stafast, H.	9853				
Simons, J. P.	10041					Stagat, R. W.	7425				
Simony, P. R.	9822					Stallcop, J. R.	6013	6202			
Sims, J. S.	8791	10040				Stamatovic, A.	8979	9169			
Sinanoglu, O.	6652					Standage, M. C.	6992				
Sinfailam, A. L.	6810	8027				Starace, A. F.	6643	7136	7555	7562	8032
Singh, R. S.	10162					Starikova, G. S.	7394	9662	9677	9742	
Sinyanskii, V. F.	8081					Starodub, V. P.	6836				
Sipler, D. P.	9057					Starostin, A.	8506				
Skubenich, V. V.	7462	9017				Starr, W. L.	8321				
Slanger, T. G.	9222	10129	10457			Stauffer, A. D.	6995	7403	7636	9263	10766
Slater, J.	7472	9725	10768			Stebbing, R. F.	6666	7576	7917	9132	
Slavik, V. N.	8779					Stefani, G.	7502	10606			
Slevin, J.	6992					Stefanov, B.	10599				
Slobodyanyuk, V. A.	10357					Stein, T. S.	7720	10733	10742	10760	10767
Smalley, R. E.	7306					Steph, N. C.	9720				
Smart, J. H.	10760	10767				Stephan, K.	10745				
Smirnov, B. M.	8081					Stern, R. C.	7449	7451			
Smirnov, Yu. F.	6882					Stevens, W. J.	9763				
Smirnov, Yu. M.	7394	9662	9677	9742	10358	Stewart, A. L.	9608	9831			
Smith Jr., V. H.	9063					Stewart, D. T.	6580				
Smith, A. C. H.	7548	8959	9651	10590	10747	Stewart, R. F.	8005				
Smith, A. J.	7457	9717				Stilley, J. L.	10485				
Smith, E. R.	7080	7122	7399			Stockbauer, R.	7052				
Smith, G. P.	10126	10646	10647			Stockdale, J. A. D.	6885	7123	7124	8958	10353
Smith, K.	7530					Stolarski, R. S.	8382	8384			
Smith, S. J.	7524	7600	9394			Stoll, W.	7595	8385	8979	9169	
Smyth, K. C.	6790	6829	6830	7424		Stone, E. J.	7522	8982	9126		
Snyder, R.	6554					Stori, H.	10745				
Sokoloff, J.	10765					Strakhova, S. I.	7583	10617	10619	10773	
Soley, F. K.	8963					Strathdee, S.	8948				
Somerville, W. B.	717	2847				Sugar, J.	6582				
Sonntag, B.	6538					Sukumar, C. V.	6997				
Souter, V. V.	8357	10754				Sullivan, J.	9022				
Spence, D.	6859	7420	7459			Sullivan, S. A.	9487				
Spicer, W. E.	8183					Sulzmann, K. G. P.	8745				
Srivastava, B. B.	10036	10354	10446			Suzuki, H.	7497	7533	8026	10594	
Srivastava, M. K.	6594	6745	7125	8024	9960	Suzuki, I. H.	9656				
	10020	10612				Suzuki, T.	6883	6884			
Srivastava, R.	9295	9470				Svelto, O.	8639				
Srivastava, S. K.	6951	7119	7271	7452	7454	Swanson, J. R.	9024	9302	9967	10769	
	7461	7537	7858	8025	8079	Swanson, N.	6744	10724			
	8618	8641	9011	10023	10158	Syms, R. F.	7391	7574			
	10379	10620	10624	10725	10730						

Szmytkowski, C.	9020	9021				Tootoonchi, H.	9683				
Szoke, A.	8257	8339				Toshima, N.	9819	9843			
Szydlík, P. P.	6703	7379				Touzeau, M.	10450				
Tadjeddine, M.	9690	10648	10651			Trajmar, S.	6599	6646	6700	6951	6993
Tahira, S.	9056						7119	7452	7454	7461	7464
Tai, H.	9966						7547	7858	8025	8079	8269
Takayanagi, K.	6881	9821					8316	8618	8641	8873	8918
Takayanagi, T.	7497	7533	8026	10594			9011	9679	9832	9854	9913
Tal, Y.	8723						9952	10023	10593	10620	10624
Talukdar, B.	7310					Trakhtenberg, L. I.	10723	10725	10730		
Tambe, B. R.	7418	7602	8276	9367		Treffitz, E.	8508				
Tan, K. H.	9293					Trevor, D. J.	8781				
Tanaka, H.	6883	6884	10158			Tripathi, A. N.	8741	9025			
Tanaka, I.	8774					Tripathi, D. N.	6594	6745			
Tanchich, A.	8152					Trnovec, J.	8613	8624			
Tancic, A. R.	7435	7506					7440				
Taylor, H. S.	8066	8334				Tronc, M.	6593	6751	7450	7528	9014
Taylor, I. R.	7390						9467	9839	10028	10597	10735
Taylor, J. W.	6539					Truhlar, D. G.	6702	7026	7597	8107	8195
Taylor, K. T.	7276	7277	7560	7561	8773		8314	8618	8620	9011	9256
	10768					Tsai, J.-S.	8771				
Taylor, P. O.	7445	8917	9962	10750	10751	Tsuboi, T.	7594	10631			
Teillet-Billy, D.	9242	9509	10732			Tsuji, A.	6597	8111			
Temkin, A.	7442	7601	7865	8250	8275	Tsung, P. N.	7378				
	8725	9016	9833	10591		Tsurubuchi, S.	7146	8915	9393		
Teshima, R.	8178					Tubbs, E. F.	6668				
Teubner, P. J. O.	6541	6584	6879	7499	8353	Tulip, J.	8083	9265			
	9059	9061	9846			Turnbull, A. D.	9471				
Theodosiou, C. E.	9366					Tweed, R. J.	8135	8716	8787		
Thiel, W.	6588					Twigt, W.	9055				
Thielmann, U.	9329					Twomey, T. R.	8922	10762			
Thomas, L. D.	6509	6649	7385	7419	7508	Ueda, K.	10034				
	8334					Ugbabe, A.	6879	7499	9059		
Thomas, T. F.	9490					Ugrin, S. Yu.	10753				
Thompson, D. G.	7275	8776	9333			Upadhya, K. N.	8624				
Tiedemann, P. W.	9463	10127				Urnov, A. M.	6743	7400	8942		
Tiernan, T. O.	9963					Uselman, W. M.	8792				
Tip, A.	8402					Vainshtein, L. A.	7719				
Tiribelli, R.	7502	10606				Valignat, S.	10759				
Tiwari, P.	7309	9680				Vallee, O.	10356				
						Van Asselt, N. P. F. B.	7308				
Tiwary, S. N.	6748	8056				Van Brunt, R. J.	7049	7094	7095	9824	
Tokue, I.	7433					Van De Water, W.	8940	10743			
Tol, R. R.	8080					Van Der Wiel, M. J.	7002	7595	7900	8006	8067
Ton-That, D.	6557	9058	9243				8080	8385	8729	9328	9674
							10772				

Van Dijk, W. L.	8960					Watson, C. E.	8382	8383	8384					
Van Eck, J.	7458	7531	10743			Watson, R. T.	9852							
Van Ittersum, T.	6560	8588				Watson, W. S.	6580	7407						
Van Raan, A. F. J.	8199					Wauchop, T. S.	6738							
Van Sprang, H. A.	10011					Weatherford, C. A.	7417	8254	8617					
Van Veen, E. H.	8492	8561	8960			Weber, J. H.	7081							
Van Wingerden, B.	7885	9369				Weigold, E.	6527	6541	6584	6879	7499			
Van Wyngaarden, W. L.	8272	8789					7502	8274	8353	9059	9061			
Van-Catledge, F. A.	8195						9340	9343	9369	9473	9476			
Vanderhoff, J. A.	8483						9846	10025	10604	10605				
Vanderpoorten, R.	6837	7436	8938	9168		Weil, K. G.	7664							
Veigele, W. J.	8112					Weingartshofer, A.	6872	7466	9668					
Veillette, P.	8395	10589				Weinhold, F.	8791							
Vestal, M. L.	9348	9856	9857			Weinreich, G.	9190							
Vichon, D.	9829	10596	10598	10722		Weisheit, J. C.	6819	7439						
Victor, G. A.	7078	8005				Weiss, M. J.	8715	9300						
Viinikka, E. K.	9061					Welge, K. H.	6738	7307	8323	8739	9480			
Vilesov, F. I.	6670	8495				Wells, C. A.	6873							
Vinciguerra, D.	7502	10606				Wells, W. C.	8964							
Vinogradov, A. V.	8942					Wendin, G.	6591							
Vinogradov, V. S.	9676					West, J. B.	7890	8059	8184	8744	9334			
Vogler, M.	6809						9747	10180						
Vogt, E.	8241					West, W. P.	7917							
Von Engel, A.	6688					Westerveld, W. B.	7458	7531						
Von Holdt, R. E.	10015					Westwood, N. P. C.	8693							
Von Niessen, W.	9723					Wharton, L.	7306							
Vroom, D. A.	7598	9012	9170			Wheeler, J. A.	8638							
Vukstich, V. S.	8463					Whitehead, W. D.	7049							
Vuskovic, L.	6956	8068	9172	9257	10725	Wicke, B. G.	10158							
Wagenaar, R. W.	8402	9397	9678	10607		Wight, G. R.	7002	7900	8067	8080	9328			
Wainwright, P. F.	9718						9674	10772						
Wakiya, K.	7497	7533	10594			Wilden, D. G.	8962	9673						
Walker, D. W.	6797					Wildt, R.	8638							
Walker, I. C.	9042					Wilk, S. F. J.	7446	10024						
Walker, T. W.	6581					Williams, A. R.	5461	5757	5876	6401				
Walters, G. K.	8963					Williams, G. R. J.	9343	9476						
Walters, H. R. J.	6793	7883	9244			Williams, J. F.	6794	6795	6952	6953	6955			
Wankenne, H.	6645						7383	7438	7514	7515	7516			
Warden, E. S.	9351						8315							
Watanabe, S.	9650	9654	10636			Williams, P. F.	6709							
Watanabe, T.	7130	7473	8367			Williams, R. J.	6606	7913	8507	9018	9830			
Watanabe, Y.	9650	9654	10636				10017	10090						
Watson Jr., J.	9332	10443				Williams, R. S.	9046							
						Williams, W. L.	7886							
						Williams, W. X.	8641							

Williams, W.	6599	6646	6700	6878	7452	Yakovleva, V. I.	8253							
	7547	7553	8079	8269	8316	Yamada, H.	8774							
	8641	8873	9679	9854	9913	Yamashita, I.	7054							
	10023	10624												
Williamson Jr., W.	6607	6789	8055	8070	8181	Yamazaki, Y.	10034							
	8277	10009				Yarlagadda, B. S.	8334							
Williamson, J. H.	1750					Yarunin, V. S.	8061							
Willis, B. A.	6795	6952				Yates-Williams, M. A.	9683							
Wilson, D. J.	8695					Yeager, D. L.	7263							
Wilson, J. M.	8255					York, G.	7053							
Wilson, K. H.	10484					Yurev, M. S.	6711	8061						
Wilson, W. G.	7886					Yurova, I. Yu.	7453	10032						
Wincel, H.	7635					Zajonc, A. G.	9190							
Wine, P. H.	8985	9852				Zapesochnyi, I. P.	6650	6836	6880	7128	7272			
Winter, H.	8968						7416	7444	7462	7543	8029			
Winter, N. W.	7554	10122	10624				8357	8463	8692	8738	9017			
							10084	10753	10754					
Winter, T. G.	6550					Zaraga, F.	8639							
Winterfeld, C.	9173					Zarcone, M.	9043							
Winters, H. F.	7120					Zare, R. N.	9724							
Winters, K. H.	6626	6821	6958	7436	8197	Zavilopulo, A. N.	8357							
	9168	9365	9475	10035	10613	Zelskii, A. S.	8177							
	10614					Zeman, H. D.	9047							
Wirsam, B.	6698					Zgainski, A.	8968							
Wolfe, D. M.	9683					Zgorzelski, M.	10117							
Wong, S. F.	7029	9461	10592			Zhukov, I. G.	8692							
Woo, S. B.	9133					Ziegenbein, B.	9027							
Woodruff, P. R.	7890	8059	10453			Ziesel, J. P.	6558	6945						
Wooten, J. W.	6552					Zietz, R.	10649							
Wray, M. M.	7554					Zimmerman, A. H.	7863							
Wu, C. H.	10027					Zipf, E. C.	8964	9834						
Wuilleumier, F.	8071					Zittel, P. F.	8969							
Xuan, C. N.	9972					Zivanovic, D.	8036	8949	9494					
Yaakobi, B.	10493					Zmbov, K. F.	10027	10757						
Yablonovitch, E.	9173					Zorn, J. C.	9190							
Yagishita, A.	7533	8026				Zubek, M.	9020	9021						
Yakhontova, V. E.	7401													

VI. Errata for NBS Special Publication 426

Electron Cross Section Index (Corrections and Additions)

ELASTIC SCATTERING EXPERIMENTAL

Normalized

Kr	6463 Lewis, 74	
Ne	6463 Lewis, 74	
Xe	6463 Lewis, 74	
N ₂	5010 Pavlovic, 72	5012 Shyn, 72

IONIZATION EXPERIMENTAL

Normalized

N ₂	3687 Aarts, 68
----------------	----------------

ELECTRONIC EXCITATION EXPERIMENTAL

Normalized

Ar*	6005 Borst, 74
He	4790 Brongersma, 72
He*	6005 Borst, 74

Relative

Na	5027 Wykes, 72
----	----------------

ELECTRONIC EXCITATION THEORETICAL

Normalized

He	5276 Madison, 73	5898 Mathur, 73
----	------------------	-----------------

DE-EXCITATION EXPERIMENTAL

Normalized

Xe	4130 Allen, 69
----	----------------

DISSOCIATIVE IONIZATION EXPERIMENTAL

Normalized

CO ₂	4336 Sroka, 70
N ₂	5070 Halas, 72

DISSOCIATIVE ATTACHMENT EXPERIMENTAL

Relative

CsBr	2910 Ebinghaus, 64
CsCl	2910 Ebinghaus, 64
CsF	2910 Ebinghaus, 64
CsI	2910 Ebinghaus, 64
KBr	2910 Ebinghaus, 64
KCl	2910 Ebinghaus, 64
KI	2910 Ebinghaus, 64
LiBr	2910 Ebinghaus, 64
LiF	2910 Ebinghaus, 64
LiI	2910 Ebinghaus, 64
NaBr	2910 Ebinghaus, 64
NaF	2910 Ebinghaus, 64
NaI	2910 Ebinghaus, 64
RbBr	2910 Ebinghaus, 64
RbCl	2910 Ebinghaus, 64
RbI	2910 Ebinghaus, 64

FREE-FREE THEORETICAL

Normalized

Cs	5075 John, 72
K	5075 John, 72
Li	5075 John, 72
Na	5075 John, 72
Rb	5075 John, 72

Bibliography

Add:		4807	ERRATUM: Phys. Rev. A 14 , 1936-1937 (1976)
5027	Wykes, J., The Variation with Electron Scattering Angle of the Polarization of Atomic Line Radiation Excited by Electron Impact, J. Phys. B 5 , 1126-1137 (1972).	4953	(1972)
		4954	ERRATUM: J. Phys. B 8 , 684 (1975)
		5081	ERRATUM: J. Phys. B 6 , 2204 (1973)
		5139	Braun
		5153	ADDENDUM: Knirk, D. L., J. Chem. Phys. 63 , 1699 (1975)
Corrections:		5273	58,
114	Seiler	5474	Codling
686	Ramien	5480	Gregory
1291	Bohm	5524	duplicate of 4953
3372	duplicate of 3396	5696	duplicate of 1865
4137	ERRATUM: J. Chem. Phys. 55 , 2004-2005 (1971)	5839	(1973)
4318	ERRATUM: Chem. Phys. Lett. 7 , 395 (1970)	6195	ADDENDUM: Phys. Rev. A 13 , 1276-1277 (1976)
4334	duplicate of 4069	6231	347-348
4421	additional author: Yates, A. C.	6268	ERRATUM: Phys. Rev. A 12 , 725 (1975)
4554	duplicate of 4738	6308	treat as an ADDENDUM to 5586
4736	duplicate of 4743	6344	translation of 6030
		6385	additional author Standage, M. C.

U.S. DEPT. OF COMM. BIBLIOGRAPHIC DATA SHEET	1. PUBLICATION OR REPORT NO. NBS SP-426, Suppl. 1	2. Gov't Accession No.	3. Recipient's Accession No.
4. TITLE AND SUBTITLE Bibliography of Low Energy Electron and Photon Cross Section Data (January 1975 through December 1977)		5. Publication Date June 1979	
		6. Performing Organization Code	
7. AUTHOR(S) J. W. Gallagher, J. R. Rumble, Jr., E. C. Beaty		8. Performing Organ. Report No.	
9. PERFORMING ORGANIZATION NAME AND ADDRESS NATIONAL BUREAU OF STANDARDS DEPARTMENT OF COMMERCE WASHINGTON, D.C. 20234		10. Project/Task/Work Unit No.	
		11. Contract/Grant No.	
12. Sponsoring Organization Name and Complete Address (Street, City, State, ZIP) Same as Item 9		13. Type of Report & Period Covered Jan. 1975 through Dec. 1977	
		14. Sponsoring Agency Code	
15. SUPPLEMENTARY NOTES Library of Congress Catalog Card Number: 78-600156			
16. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here.) A bibliography of original reports of measurements or calculations of electron, positron and photon cross sections for atoms, small molecules, and their ions is presented. A detailed index to the bibliography facilitates retrieval of cross section data for specific processes and associated atomic or molecular species. A comprehensive author index is included. The bibliography covers the calendar years 1975-1977. This work supplements a previous bibliography which covered the literature through 1974.			
17. KEY WORDS (six to twelve entries; alphabetical order; capitalize only the first letter of the first key word unless a proper name; separated by semicolons) Atom; collision cross section; detachment; dissociation; elastic scattering; electron; excitation; ion; ionization; molecule; photon; positron			
18. AVAILABILITY ☒ Unlimited ☐ For Official Distribution. Do Not Release to NTIS ☒ Order From Sup. of Doc., U.S. Government Printing Office Washington, D.C. 20402, SD Stock No. 003-003-02074-5 ☐ Order From National Technical Information Service (NTIS) Springfield, Virginia 22151		19. SECURITY CLASS (THIS REPORT) UNCLASSIFIED	21. NO. OF PAGES 115
		20. SECURITY CLASS (THIS PAGE) UNCLASSIFIED	22. Price \$4.00

**Right in the
Journal of Physical
and Chemical
Reference Data!**

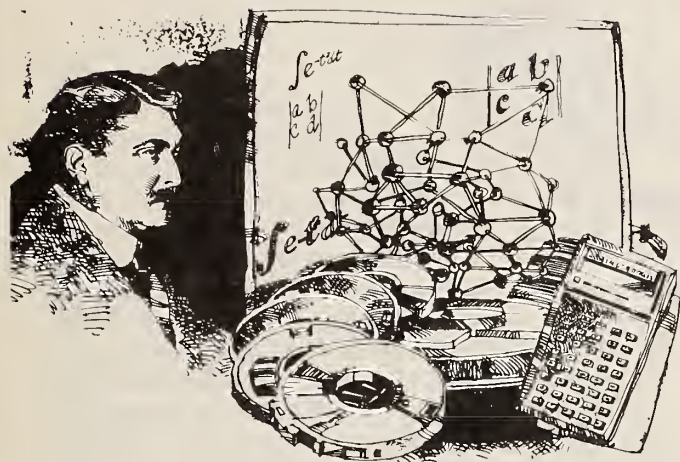
Send for complete list of reprints!



Please Attach This Order Form To Purchase Order.

JOURNAL OF RESEARCH

of the National Bureau of Standards



Subscribe now — The new National Bureau of Standards Journal

The expanded Journal of Research of the National Bureau of Standards reports NBS research and development in those disciplines of the physical and engineering sciences in which the Bureau is active. These include physics, chemistry, engineering, mathematics, and computer sciences. Papers cover a broad range of subjects, with major emphasis on measurement methodology, and the basic technology underlying standardization. Also included from time to time are survey articles on topics closely related to the Bureau's technical and scientific programs. As a special service to subscribers each issue contains complete citations to all recent NBS publications in NBS and non-NBS media. Issued six times a year. Annual subscription: domestic \$17.00; foreign \$21.25. Single copy, \$3.00 domestic; \$3.75 foreign.

- Note: The Journal was formerly published in two sections: Section A "Physics and Chemistry" and Section B "Mathematical Sciences."

NBS Board of Editors
Churchill Eisenhart,
Executive Editor (Mathematics)
John W. Cooper (Physics)
Donald D. Wagman (Chemistry)
Andrew J. Fowell (Engineering)
Joseph O. Harrison (Computer Science)
Helmut W. Hellwig (Boulder Labs.)

For a review copy, write Journal of Research, National Bureau of Standards, U.S. DEPARTMENT OF COMMERCE Washington, D.C. 20234

Subscription Order Form

Enter my subscription to NBS Journal of Research at \$17.00. Add \$4.25 for foreign mailing. No additional postage is required for mailing within the United States or its possessions. (SJR—File Code 2Q)

Send Subscription to:

☐ Remittance Enclosed
(Make checks payable to Superintendent of Documents)

☐ Charge to my Deposit Account No.

Name-First, Last

Company Name or Additional Address Line

Street Address

City

State

Zip Code

MAIL ORDER FORM TO:
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402

There's
new
book
O...

DIMENSIONS

NBS

magazine
al Bu
Still featur
ticles of g
current topic
er product s
technology. In a
tions are designed
SCIENTISTS with illus
of recent technical
work in progress . . . **INFC**
MANAGERS of technology tr
Federal and private labs. . . **DE**
UFACTURERS advances in the field
mandatory standards. The new **DIME**
carries complete listings of upcoming
held at NBS and reports on all the latest
with information on how to order. Finally,
a page of News Briefs, aimed at keeping scie
er alike up to date on major developments at t
cal sciences and measur

(please detach here)

PLEASE PRINT

NBS TECHNICAL PUBLICATIONS

PERIODICALS

JOURNAL OF RESEARCH—The Journal of Research of the National Bureau of Standards reports NBS research and development in those disciplines of the physical and engineering sciences in which the Bureau is active. These include physics, chemistry, engineering, mathematics, and computer sciences. Papers cover a broad range of subjects, with major emphasis on measurement methodology, and the basic technology underlying standardization. Also included from time to time are survey articles on topics closely related to the Bureau's technical and scientific programs. As a special service to subscribers each issue contains complete citations to all recent NBS publications in NBS and non-NBS media. Issued six times a year. Annual subscription: domestic \$17.00; foreign \$21.25. Single copy, \$3.00 domestic; \$3.75 foreign.

Note: The Journal was formerly published in two sections: Section A "Physics and Chemistry" and Section B "Mathematical Sciences."

DIMENSIONS/NBS

This monthly magazine is published to inform scientists, engineers, businessmen, industry, teachers, students, and consumers of the latest advances in science and technology, with primary emphasis on the work at NBS. The magazine highlights and reviews such issues as energy research, fire protection, building technology, metric conversion, pollution abatement, health and safety, and consumer product performance. In addition, it reports the results of Bureau programs in measurement standards and techniques, properties of matter and materials, engineering standards and services, instrumentation, and automatic data processing.

Annual subscription: Domestic, \$11.00; Foreign \$13.75

NONPERIODICALS

Monographs—Major contributions to the technical literature on various subjects related to the Bureau's scientific and technical activities.

Handbooks—Recommended codes of engineering and industrial practice (including safety codes) developed in cooperation with interested industries, professional organizations, and regulatory bodies.

Special Publications—Include proceedings of conferences sponsored by NBS, NBS annual reports, and other special publications appropriate to this grouping such as wall charts, pocket cards, and bibliographies.

Applied Mathematics Series—Mathematical tables, manuals, and studies of special interest to physicists, engineers, chemists, biologists, mathematicians, computer programmers, and others engaged in scientific and technical work.

National Standard Reference Data Series—Provides quantitative data on the physical and chemical properties of materials, compiled from the world's literature and critically evaluated. Developed under a world-wide program coordinated by NBS. Program under authority of National Standard Data Act (Public Law 90-396).

NOTE: At present the principal publication outlet for these data is the Journal of Physical and Chemical Reference Data (JPCRD) published quarterly for NBS by the American Chemical Society (ACS) and the American Institute of Physics (AIP). Subscriptions, reprints, and supplements available from ACS, 1155 Sixteenth St. N.W., Wash., D.C. 20056.

Building Science Series—Disseminates technical information developed at the Bureau on building materials, components, systems, and whole structures. The series presents research results, test methods, and performance criteria related to the structural and environmental functions and the durability and safety characteristics of building elements and systems.

Technical Notes—Studies or reports which are complete in themselves but restrictive in their treatment of a subject. Analogous to monographs but not so comprehensive in scope or definitive in treatment of the subject area. Often serve as a vehicle for final reports of work performed at NBS under the sponsorship of other government agencies.

Voluntary Product Standards—Developed under procedures published by the Department of Commerce in Part 10, Title 15, of the Code of Federal Regulations. The purpose of the standards is to establish nationally recognized requirements for products, and to provide all concerned interests with a basis for common understanding of the characteristics of the products. NBS administers this program as a supplement to the activities of the private sector standardizing organizations.

Consumer Information Series—Practical information, based on NBS research and experience, covering areas of interest to the consumer. Easily understandable language and illustrations provide useful background knowledge for shopping in today's technological marketplace.

Order above NBS publications from: Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Order following NBS publications—NBSIR's and FIPS from the National Technical Information Services, Springfield, Va. 22161.

Federal Information Processing Standards Publications (FIPS PUB)—Publications in this series collectively constitute the Federal Information Processing Standards Register. Register serves as the official source of information in the Federal Government regarding standards issued by NBS pursuant to the Federal Property and Administrative Services Act of 1949 as amended, Public Law 89-306 (79 Stat. 1127), and as implemented by Executive Order 11717 (38 FR 12315, dated May 11, 1973) and Part 6 of Title 15 CFR (Code of Federal Regulations).

NBS Interagency Reports (NBSIR)—A special series of interim or final reports on work performed by NBS for outside sponsors (both government and non-government). In general, initial distribution is handled by the sponsor; public distribution is by the National Technical Information Services (Springfield, Va. 22161) in paper copy or microfiche form.

BIBLIOGRAPHIC SUBSCRIPTION SERVICES

The following current-awareness and literature-survey bibliographies are issued periodically by the Bureau:

Cryogenic Data Center Current Awareness Service. A literature survey issued biweekly. Annual subscription: Domestic, \$25.00; Foreign, \$30.00.

Liquefied Natural Gas. A literature survey issued quarterly. Annual subscription: \$20.00.

Superconducting Devices and Materials. A literature survey issued quarterly. Annual subscription: \$30.00. Send subscription orders and remittances for the preceding bibliographic services to National Bureau of Standards, Cryogenic Data Center (275.02) Boulder, Colorado 80302.

U.S. DEPARTMENT OF COMMERCE
National Bureau of Standards
Washington, D.C. 20234

OFFICIAL BUSINESS

Penalty for Private Use, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-215



SPECIAL FOURTH-CLASS RATE
BOOK
